

AGRICULTURAL OUTLOOK

October 1989

Economic Research Service
United States Department of Agriculture

A Look at Farmers
Leaving Farming
See page 18

AGRICULTURAL OUTLOOK

October 1989/AO-157

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Economics Editor—Gregory Gajewski (202) 786-3313

Associate Editor—Patricia F. Singer (202) 786-3313

Consulting Editor—Clark Edwards (202) 786-3313

Managing Editor—Eric Sorensen (202) 786-1494

Editorial Staff—Shirley Hammond

Statistical Coordinator—Ann Duncan (202) 786-3313

Design Coordinator—Carolyn Riley

Production Staff—Karen Sayre, Chloia Peterson

Composition—Joyce Bailey

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In Brief. . . News of Farmer Exits, Income, Exports, Coarse Grain Trade

Recent surveys show that farmers' 1988 bankruptcy filings are down by 50 percent from this decade's high, which was in 1986. Despite the 1980's farm financial crisis, farm numbers fell less than in each of the three preceding decades. Farm numbers declined by 266,600 during 1980-89, compared with 1.7 million in the 1950's, 1 million in the 1960's, and 516,000 in the 1970's.

Net farm income could increase by 5 to 16 percent this year, totaling \$48 to \$53 billion. Net farm income measures the value of the current year's production plus Government payments, less total costs. The increase reflects more planted acres and forecast higher production, despite early weather problems in some regions.

Farmers' net cash income, however, is expected to decline 5 to 13 percent from last year's record \$59.9 billion. Net cash income measures the value of commodities sold plus Government payments, less cash costs, and includes sales of stocks built up over previous years. Last year's drought helped push up 1988 net cash income as stocks were sold at high prices. Adjusted for inflation, net cash income is likely to be down from the previous 3 years, but still higher than in 1985.

With higher prices offsetting a small decline in volume, U.S. agricultural exports likely reached \$40 billion in fiscal 1989 (October-September), a \$4.7-billion increase from fiscal 1988. This would be the highest since 1981's record \$44 billion. But, as most prices retreat from drought-induced highs and foreign competition intensifies, U.S. agricultural export value and volume are expected to slip in fiscal 1990.

USDA forecasts that 1989/90 world grain production will be just below the record set in 1986/87. Foreign production will set a record. But consumption will again exceed production, and stocks are forecast to drop for the third consecu-



tive year. Tight supplies of both wheat and rice are expected to boost prices. However, coarse grain prices likely will drop, reflecting the recovery in the U.S. crop.

For oilseeds, the strong recovery in U.S. production and another record foreign crop, along with record carryover in South America, will mean lower world prices. In contrast, cotton prices have been rising because of vigorous world demand and tightening supplies.

U.S. consumers are eating more meat but spending proportionately less of their incomes for it. Annual per capita meat consumption rose from about 207 pounds in 1980 to about 218 pounds last year. At the same time, the proportion of consumers' disposable income spent on meat fell from 3.8 percent to 2.5 percent. Price declines account for much of these changes; the inflation-adjusted prices of red meats have fallen about 17 percent and poultry about 10 percent since 1980. The price declines outpace the declines in other inflation-adjusted food prices.

The contracted area for the five major processing vegetables is up 14 percent in 1989 from a year earlier, and up 15 percent from 1987. Contracted tomato production this year is up 32 percent from last year. In 1988, contracted tomatoes accounted for 98 percent of total processing tomato output. Prices for processed tomato products have been holding steady despite the higher production.

Newly released 1987 Census of Agriculture estimates reveal dramatic increases in U.S. herb farming. Acreage for most herbs increased 122 percent during 1982-87, and quantity harvested jumped 248 percent. Nonetheless, U.S. imports of fresh herbs are also up, according to USDA's Animal and Plant Health Inspection Service.

Proposed GATT reforms could have a major impact on the world coarse grain market. If all trade-distorting policies for agriculture were removed, world coarse grain prices would go up, according to several recent studies. World coarse grain trade, production, and consumption would all rise. U.S. production could rise while EC output would decline. Japan would import less. In part, these results reflect an increase in world livestock production and consumption, spurred by trade liberalization. Market-based returns to U.S. coarse grain growers would rise, but total returns (including Government payments) would fall, unless decoupled income-support payments were made.

Less than 25 percent of the corn, wheat, and soybean acreage surveyed is tilled to leave at least 30 percent of the soil surface covered with residue after planting. This may have implications for the amount of land that would currently meet the conservation compliance provisions of the 1985 Food Security Act. Thirty-percent residue is commonly accepted by conservationists as indicating a conservation tillage system, and in most cases should satisfy the compliance called for in the act.



Agricultural Economy

1989 Crops Reflect Mixed Weather Conditions

Farmers are now harvesting spring-seeded crops. Some are enjoying a bountiful harvest. Others, however, are working with drought-stunted, rain-damaged, or immature crops that will not fill storage bins.

Some rain in late August and early September, plus dry weather in previously soggy areas, helped to offset the regional diversity in conditions. Still, how a farmer is faring depends largely on what region the farm is in. Even within regions there is considerable variation in crop yields, reflecting this season's uneven weather patterns.

The 1988 drought lingered in parts of the Plains States through the winter and into this spring, cutting winter wheat yields by 11 percent. Then, about the time the winter wheat was ripening, heavy rains caused problems at harvest. Rains were plentiful through the summer and into the fall, helping provide good soil moisture for the 1990 crop now being seeded.

Low Moisture Reserves in Corn Belt, Northern Plains

Spring planting conditions in the Corn Belt and the Northern Plains were generally adequate, but rains during the growing season were not sufficient to offset low subsoil moisture reserves. Drought problems reappeared, particularly over

the western Corn Belt and the Northern Plains. Summer crop development was limited by low moisture and sparse rains.

On the plus side, temperatures were cooler than last summer, which helped stretch soil moisture and limited the effect of dry soils on crop yields. Abundant rain at the end of the season in the western Corn Belt and the Plains helped mitigate the early-season dryness.

Farmers in the eastern Corn Belt and the Delta experienced poor conditions during the first part of the growing season because of too much rain. Rain kept farmers in Ohio and Indiana weeks behind normal in getting corn and soybeans planted. Crops in these areas were running as much as a month behind their normal development in late summer. But unusually dry weather in these areas in late August aided crop growth. Nonetheless, warm fall weather is still needed to speed crop maturity. The risk from an early frost is great this year.

East Had Good Year

Farmers in the East had a very good year. The Northeast suffered from low water tables and low reservoirs in late winter, but rains generally replenished moisture supplies. The Southeast enjoyed favorable weather, and yields are expected to be above average to record high. This is the first really good crop year for most Southeastern farmers in 5 or 6 years.

The West was dry again this summer, but the damage has not been as severe as in 1988. Pastures have produced more forage, and there has been little forced movement of cattle to slaughter because of a lack of feed. Also, late summer and early fall rains helped establish fall-seeded pastures in many areas, which will provide feed for the winter.

Weather improved in the Northwest this year, and crop yields are responding. The worst of the dryness seemed to skirt the region, even though some producers are again having a hard year.

Crop Production Bounces Back

The index of all U.S. crop production fell 16 percent last year because of the drought. Particularly hard hit were most grains, oilseeds, and forage. Production this year is rebounding to just below

1987's levels, but will still fall short of production in the early and mid-1980's. Cotton production, an exception to the rebound, is declining because of reduced acreage.

The increase in crop production is substantial, even though weather conditions have been much less than ideal. Part of the increase reflects a rise in seeded acreage. Farmers increased acreage because crop prices were the highest in several years, and because Government acreage-reduction provisions were relaxed, allowing operators to expand plantings and still be eligible for benefits. Cotton is an exception; the acreage reduction provision was increased to 25 percent of base acres.

Crop yields are a better measure than production of the impact of mixed weather patterns on U.S. agriculture. The September *Crop Production* report indicates that corn and oats yields may be up a third from last year's low. Barley, soybean, and hay yields are up about a fifth. All-wheat yields are off about 4 percent; marked increases in spring wheat yields are being more than offset by an approximately 11-percent drop in winter wheat yields.

Larger Crops Are Needed

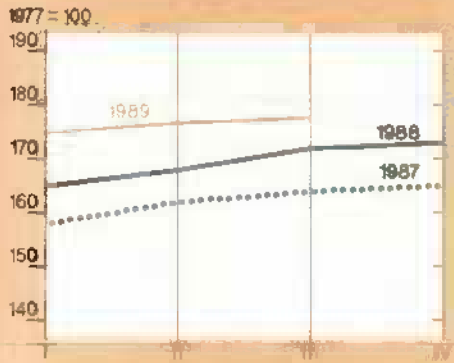
The demand for U.S. agricultural products is strong, even though prices have risen. Export volume likely has been about steady, while export value probably rose from \$35 billion in fiscal 1988 to \$40 billion. Domestic use is also holding up. So the sharp production decline in 1988 was offset to some extent by drawing down the large stocks of grains and oilseeds.

Stocks of most crops will again be whittled down, but will remain above pipeline needs during the 1989/90 season. The drawdown in stocks will also occur in other countries, but the rate of decline will be much less. The farm prices of most crops will remain sensitive to weather developments this winter, both here and abroad.

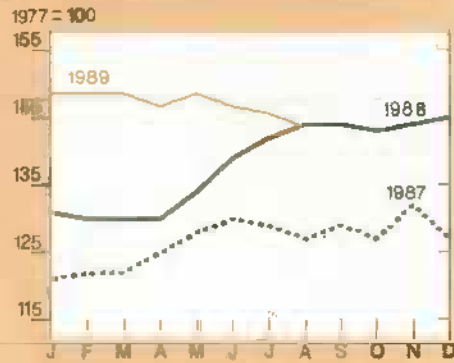
Farmers could well expand acreage again this winter and next year, responding to similar factors that boosted planted acreage this season. Thus, 1990 weather conditions will again be the focal point of the crop outlook. [Don Seaborg (202) 786-1880]

Prime Indicators of the U.S. Agricultural Economy

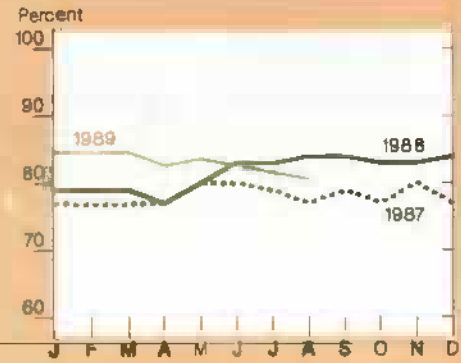
Index of prices paid by farmers



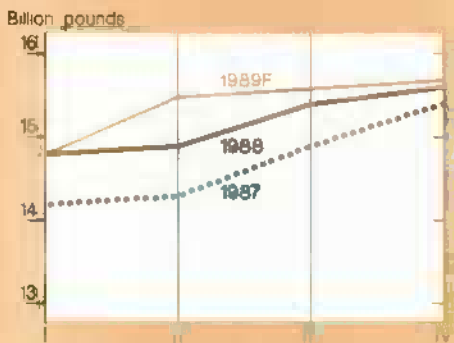
Index of prices received by farmers¹



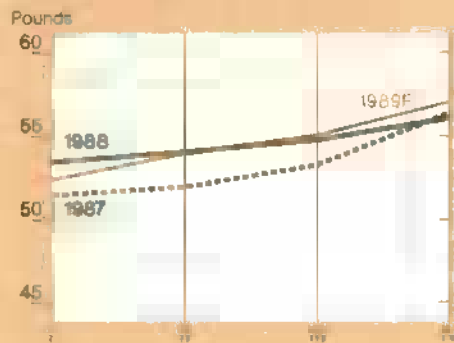
Ratio of prices received to prices paid



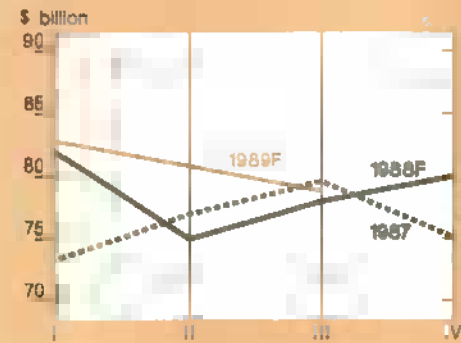
Red meat & poultry² production



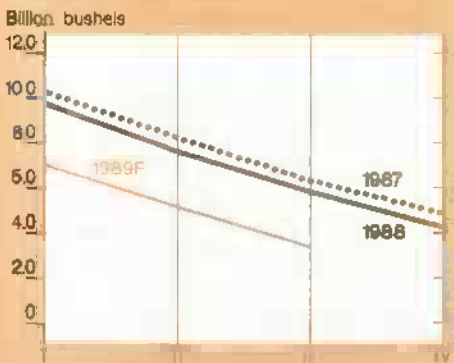
Red meat & poultry consumption, per capita^{2,3}



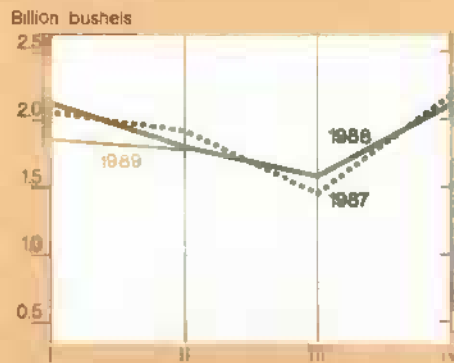
Cash receipts from livestock & products⁴



Corn beginning stocks⁵



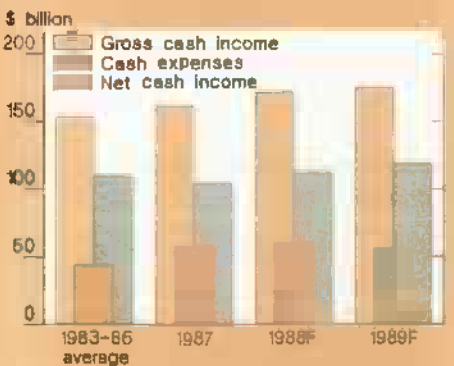
Corn disappearance⁵



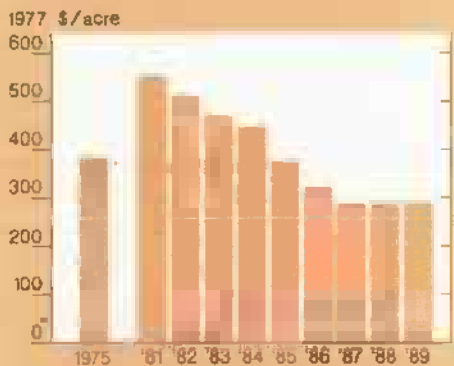
Cash receipts from crops⁴



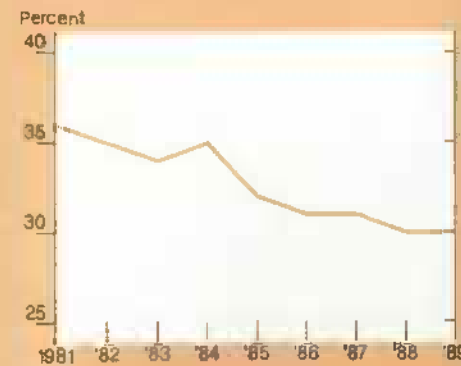
Farm net cash income



Average real value of farm real estate



Farm value/retail food costs



¹For all farm products. ²Calendar quarters. Future quarters are forecasts for livestock, corn, and cash receipts.
³Retail weight. ⁴Seasonally adjusted annual rate. ⁵I=Dec.-Feb., II=Mar.-May, III=June-Aug., IV=Sept.-Nov. F=forecast.

Livestock, Dairy, and Poultry Overview

U.S. consumers are eating more meat but spending proportionately less of their incomes for it. Annual U.S. per capita consumption of red meat and poultry increased from about 207 pounds (retail weight basis) in 1980 to about 218 pounds in 1988. Over the same period, the proportion of disposable income consumers spent for beef, pork, broilers, and turkey declined from about 3.8 percent to about 2.5 percent—a 34-percent drop in income share.

Meats account for a smaller percentage of income partly because lower priced poultry now makes up a larger proportion of meat consumption. But, more importantly, the inflation-adjusted prices of red meats have fallen about 17 percent and poultry about 10 percent in the past 9 years, outpacing the general decline in real prices for other foods.

Expenditures for all foods as a share of income have fallen, but less dramatically, from 13.6 percent in 1980 to 11.8 percent in 1988. This represents a 13.2-percent change in share of income.

Cattle Are Larger and Leaner

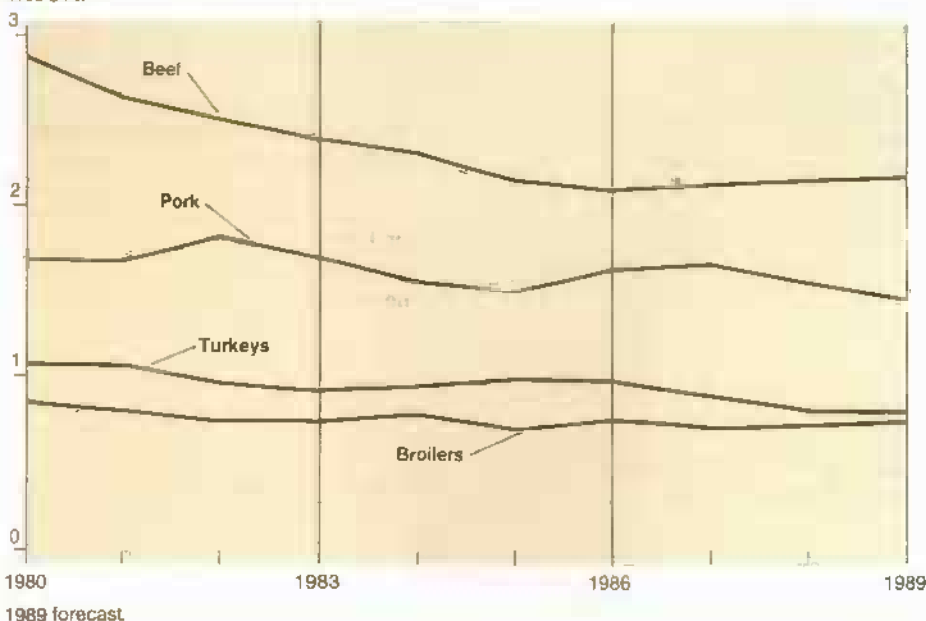
The average weight of federally inspected cattle carcasses has risen by nearly 5 pounds per year since 1974. The weights of fed cattle, especially, have been going up, because of breeding efforts and also because cattle have been placed in feedlots at greater weights. Though the number of cattle slaughtered has been declining since 1986, beef production increased in 1988 because greater carcass weights offset the decrease in numbers.

During January-July 1989, the number of cattle slaughtered was 3 percent below 1988, while federally inspected carcass weights averaged 8 pounds heavier. Beef production for this period was down only 2 percent from last year.

Today's consumer prefers a leaner product in the meat case, and marketing practices are changing accordingly. Generally, beef quality grade (and finish or fatness) increases with slaughter weight. But recently, even though slaughter weights have been increasing,

Real Prices of Meat Have Fallen

1982-84 \$/lb



so has the percentage of steer and heifer carcasses of the leaner Select quality grade. The change probably indicates that cattle types are getting larger in bone structure and muscling, so are not as fat at greater weights.

Besides the increase in fed cattle weights, a higher proportion of the slaughter mix now consists of fed cattle. About 77 percent of the slaughter mix is now composed of fed steers and heifers, compared with about 70 percent in the mid-1980's.

Cattle Prices Likely To Rise

The composite retail price for Choice beef in August was \$2.69 per pound, down 2 cents from July and slightly below the second-quarter average. The beef farm-to-retail price spread reached a record \$1.22 per pound in July but declined to \$1.17 in August. The spread widened from the second-quarter average of \$1.11 on the retail side because of greater loin and rib retail prices, and on the farm side because of the decline in live cattle prices. Retail beef price movements have a 1-to-1 effect on the price spread, while cattle price movements have a 2.4-to-1 effect.

The farm value of cattle slipped to an annual low because of the large summer supplies of competing meats and slaughter cattle—especially those cattle that were relatively heavy. Prices for Choice

fed steers declined from the middle \$70's per cwt this spring to the upper \$60's in September. The spread is expected to narrow early this fall; cattle prices are likely to increase at a greater rate than retail prices as fed beef supplies decline seasonally.

Expanded Slaughter Capacity To Boost Hog Prices

Expansion in the pork packing industry could lend significant support to hog prices this fall. After declining for several years, slaughter capacity appears to have increased in 1989; several packers have opened new facilities or remodeled old ones. The increased competition among packers has been reflected in smaller spreads between hog prices and carcass cutout values this year.

Through August, cutout values averaged about \$4 per cwt below a year earlier, while barrow and gilt prices were down only \$2.50 per cwt. The reduction in spreads occurred despite an increase in hog supplies.

Support for hog prices could be more pronounced this fall, as hog marketings are expected to drop below a year earlier. Also, some slaughter expansion projects have been completed only recently, and will become fully operational during the fourth quarter.

With a larger number of hogs demanded and slightly fewer available, barrow and gilt prices at the 7 markets likely will be above the fourth-quarter 1988 average of \$38.50 per cwt.

Broiler Expansion Continues, Prices Decline

The 10-percent estimated expansion in third-quarter broiler production for 1989 was reflected in lower wholesale prices. Average monthly prices fell below 1988 for the first time in July, and they are likely to be at or below 1988 levels for the rest of the year. The 12-city broiler price averaged 62 cents per pound in July and 57 cents in August, compared with 67 and 69 in 1988. Retail prices are also forecast lower for the rest of 1989.

Even with lower prices, net returns probably will remain positive for the rest of the year because of lower feed prices. Net returns for 1989 are expected to average 8-12 cents per pound, compared with just under 8 cents in 1988. Third-quarter returns likely averaged 10-12 cents per pound, and fourth-quarter returns are forecast to be 4-8 cents per pound.

Broiler production in 1989 likely is rising 6-7 percent. First-half production of 8.5 billion pounds, ready-to-cook, was 5 percent above a year earlier, and second-half production is increasing 7-8 percent. Weekly egg sets in July and August were 5-8 percent ahead of last year, while chicks placed were up 6-8 percent. Broiler production in 1990 is expected to expand 7-8 percent, encouraged by continued positive net returns even in light of past output growth.

Turkey Production Rising Sharply

First-half 1989 turkey production was unchanged from last year, but third-quarter output likely increased about 9-10 percent, and fourth-quarter output will increase about 12 percent from 1988. Production for the year will be up about 6 percent, compared with 3.7 percent during 1988.

High prices and positive net returns in the second quarter, plus lower feed cost prospects this fall, likely are boosting turkey production in the second half.

Updated Conversion Factor Reflects Leaner Beef

Beef consumption figures appearing in *Agricultural Outlook* depend on a conversion factor that is applied to carcass-weight data to estimate retail weight. A carcass-to-retail conversion factor of 0.74 was used for beef during 1962-85. For 1986, the factor was reduced to 0.73 to reflect closer trimming of fat (down to one-quarter inch) and more boneless cuts.

The carcass-to-retail conversion factor is now re-estimated for each calendar year as data become available. The conversion factor for 1987 was 0.71. For 1988, it has recently been estimated at 0.705.

The 1988 factor has been used to revise the estimates of per capita consumption in the Supply and Utilization data in this issue (table 10). The reduced factor indicates that the consumer received more lean beef per pound of product purchased;

the change reflects another increase in trimming of fat.

The Texas A & M National Beef Market Basket Survey, taken in 1987 and early 1988 in 12 cities across the U.S., was used in part to recompute the conversion factor.

Compared with calculations under the old 0.74 factor, the recent revision reduces the estimate of retail beef disappearance (per capita consumption) by 3.5 pounds for 1988. But, closer trimming may not have affected very much the amount of beef actually ingested by consumers. The fat and bone now removed before retail sale may earlier have been left in the consumer's pan as grease or on the plate as table scraps.

Until data for 1989 are available in 1990, the 1988 conversion factor will be used for the 1989 beef estimate. [Larry Duewer, Ken Nelson, and Fred White (202) 786-1712]

Wholesale prices dropped below a year earlier in July and August because wholesale buyers reduced purchases for end-of-the-year holiday specials when they expected second-half output to escalate. Eastern region wholesale hen turkey prices fell below 60 cents a pound in early September, compared with a high of 73 cents in June. Although prices are expected to rise as the holidays approach, they likely will remain below a year earlier.

Retail prices for frozen whole turkeys rose in July to \$1.05 a pound, compared with 96 cents a year earlier. But they are expected to ease later in 1989.

The three leading turkey-producing States continue to increase output in 1989. The preliminary USDA estimate of turkeys raised during 1989, 254.7 million birds, is up 5 percent from 1988. North Carolina, Minnesota, and California, the leading States, each show above-average increases. Their combined share is up from 43 percent of the national output in 1980 to nearly 49 percent this year.

Favorable Egg Returns Likely To Continue

Net returns to egg producers are expected to be positive this year, reflecting relatively low supplies. Net returns

likely were 14-15 cents per dozen in the third quarter and are forecast to be 7-9 cents in the fourth. The last time average net returns to egg production were positive for all four quarters of a calendar year was 1976. Returns in the first quarter of 1990 likely will continue to be positive.

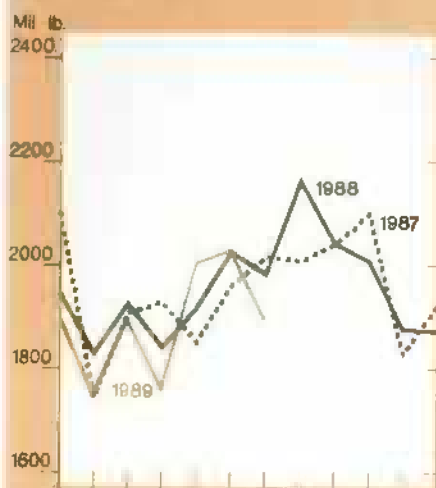
Total egg production in 1989 is expected to be down about 2 percent. Third-quarter production likely was down 1 percent, but flock rebuilding is expected to raise output 1 percent during the fourth quarter.

Hatching egg production for the year will be up about 4 percent, mainly reflecting expansion in the broiler industry. The total laying flock is about 1 percent below a year ago, with the table-egg laying flock down about 2 percent and the broiler-hatching egg flock up 3 percent. First-quarter 1990 production will be 1 to 2 percent above a year earlier.

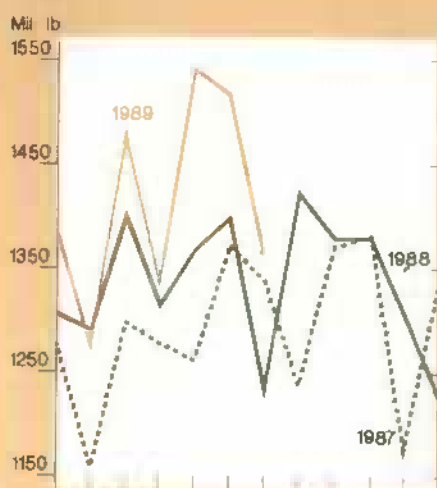
Average egg prices moved up sharply in August, from 77 cents per dozen in July to 89 cents. The increase was caused in part by the Mexican purchase of 15 million dozen eggs for delivery in September, October, and November.

Production of Livestock and Products

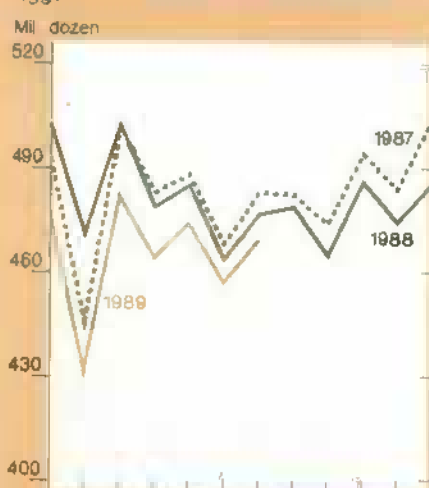
Commercial beef



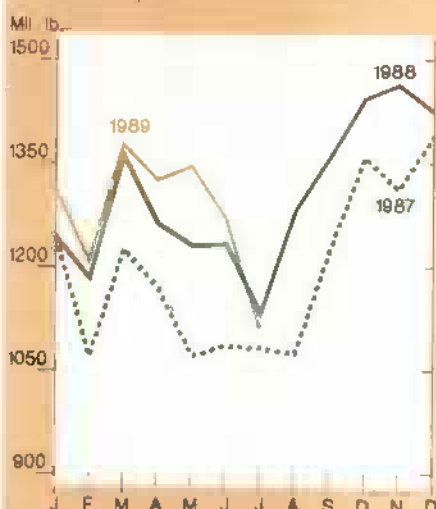
Broilers¹



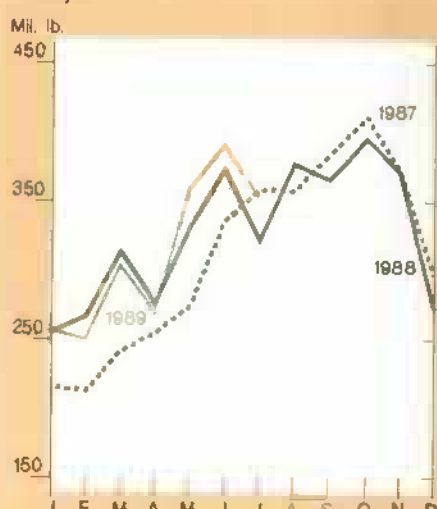
Eggs



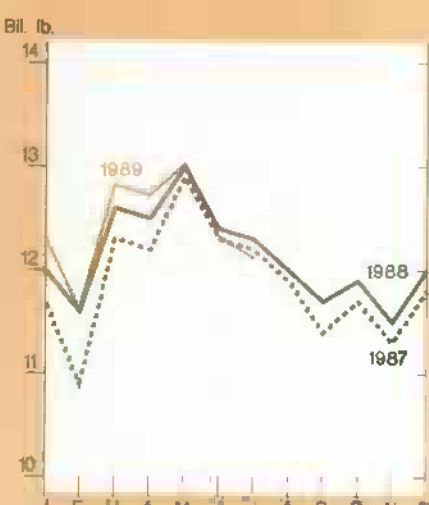
Commercial pork



Turkeys¹



Milk



¹Federally inspected production, ready-to-cook.

Wholesale prices likely averaged 80-81 cents per dozen in the third quarter, 7-8 cents above a year earlier. Fourth-quarter prices are expected to be 68-72 cents per dozen, compared with 67 cents a year before. Prices for 1990 are expected to average 62-68 cents.

Farm Milk Prices On the Rise

The 1989 annual average price of all milk is expected to climb about \$1 above 1988's \$12.24 per cwt, to the highest since 1984. Average manufacturing grade milk prices probably will be \$1.50 or more above the current support price.

Strong wholesale prices for products—the result of brisk commercial use of cheese and nonfat dry milk, and lower milk production—kept the summer all-milk average price more than \$1 above last summer. The August average of \$12.90 per cwt was up \$1.10 from a year earlier and was the highest price for the month since 1984.

The Minnesota-Wisconsin (M-W) price for manufacturing grade milk was \$12.37 per cwt in August, up more than \$1 since April and about \$2 above the support price. The M-W price could reach more than \$13 per cwt by fourth-quarter 1989

without much more of an increase in wholesale prices.

September all-milk prices probably were well above a year earlier. Fourth-quarter milk prices are expected to remain above a year earlier. Commercial use probably will stay brisk, and milk production is not forecast to make a very strong recovery.

For further information, contact: Ken Nelson, coordinator; Fred White, cattle; Kevin Bost, hogs; Lee Christensen and Larry Witucki, broilers, turkeys, and eggs; Sara Short and Jim Miller, dairy. All are at (202) 786-1285.

Field Crops Overview

A larger harvest of most crops is likely in 1989/90. World grain production is forecast to total 1,659 million metric tons, only 1 percent below the record of 1986/87. Foreign production will set a record. But consumption will again exceed production, and stocks will drop for the third consecutive year. Tight supplies of both wheat and rice are expected to boost prices. However, coarse grain prices will drop because of the recovery in the U.S. crop.

For oilseeds, strong recovery in U.S. production and another record foreign crop, along with record carryover in South America, will mean lower world market prices. In contrast, cotton prices have been rising because of continued vigorous world demand and tightening supplies.

Wheat Prices Up in 1989/90

World wheat production is forecast up 5 percent in 1989/90 (table 26). However, consumption is expected to outpace production for the third consecutive year, reducing stocks to their lowest since 1975/76. The world stocks-to-use ratio is forecast to drop to 20 percent, the smallest in 30 years. World trade may grow slightly, but higher prices and much smaller USSR imports are holding total imports below the volume of 2 years ago.

U.S. supplies of wheat in 1989/90 are likely to be down 10 percent from a year earlier; lower beginning stocks more than offset expected production gains. Production is forecast up 14 percent to 2.1 billion bushels, while total use is projected at 2.3 billion, down 5 percent from last year.

Lower U.S. wheat supplies, together with larger competitor supplies, mean U.S. exports may be down more than 10 percent to less than 1.3 billion bushels. Production by the major foreign exporters is forecast up 13 percent, as Canada and Argentina recover from drought.

U.S. wheat ending stocks are forecast to decline for the fourth straight year in 1989/90, as demand continues to outstrip production. Ending stocks next May 31 are forecast at 494 million bushels, down

about 30 percent from a year earlier and the lowest since 1974/75. Most of the reduction will be in Commodity Credit Corporation (CCC) inventory and the Farmer-Owned Reserve (FOR).

FOR loans are expected to be redeemed as they come due. The presidential authorization to use a portion of the Food Security Reserve for food aid shipments is likely to contribute to the decline in the CCC inventory.

U.S. farm prices for wheat are expected to range from \$3.85 to \$4.20 a bushel for the 1989/90 season, well above 1988/89.

Farmers Allowed To Flex Wheat Plantings

On September 13, the Secretary announced that participating farmers have the option of planting up to 105 percent of their wheat base acres to boost 1990 supplies. But for every acre of wheat planted in excess of 95 percent of the base, the acreage used to compute deficiency payments will be cut by 1 acre. So if a producer plants 105 percent of the base, only 85 percent will be used to compute deficiency payments.

Farmers who plant the extra wheat on corn or other program crop base acres will not lose that base. But the increase in plantings will not increase their future wheat base.

Moreover, farmers still retain the option of holding to the 5-percent acreage reduction announced earlier, with the usual deficiency payment computations.

Rice Prices Also To Rise

World rice demand has been strong and supplies are tight, pushing prices up. China, Indonesia, and Iran have led the increased demand in calendar 1989. World rice prices rose sharply, from \$5.90 per cwt for long grain rough rice in January to a peak of \$8.91 per cwt in July.

During August, world rice prices started to soften, following a seasonal pattern. Prices dropped from \$8.91 per cwt on August 1 to \$7.70 on August 22, because of slowed import activity and increased availability of exportable supplies. Several importers have passed over tenders,

apparently waiting for prices to come down even further this fall.

Thailand is harvesting a relatively large second-season crop and prospects are good for the main-season crop, harvested in December and January. In addition, Vietnam entered the rice market as an exporter this year, reportedly selling 405,000 tons of low-quality rice.

However, with tight U.S. rice supplies and continued strong global demand, U.S. farm prices for 1989/90 are expected to average well above the estimated \$6.50-\$7.00 of 1988/89.

Feed Grain Prices Ease Despite Smaller Stocks

The U.S. feed grain harvest for 1989 is estimated at 217 million tons. This is 45 percent above last year. Area harvested is forecast to increase 11.2 million acres, or 14 percent, because less land was idled under annual Government programs and fewer acres were abandoned. Improved growing conditions increased the forecast yield to 2.37 tons per acre, 27 percent above last year.

The U.S. feed grain supply for 1989/90 is forecast at 281.7 million tons, down 1 percent from last year. A projected draw-down of 70 million tons in beginning stocks will not be completely offset by this year's larger production.

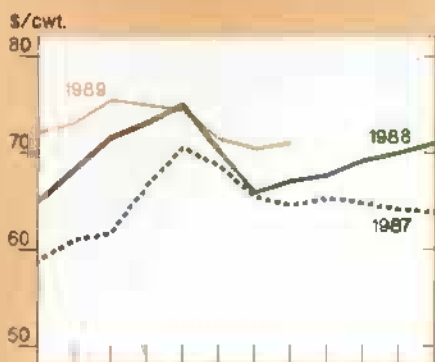
Total use in 1989/90 is projected at 225 million tons, an increase of 5 million from the estimate for 1988/89. Domestic use is expected to rise by almost 9 million tons, but exports may drop despite lower prices because of greater competition from foreign shippers. With use likely to exceed production, U.S. ending stocks may drop about a tenth.

The U.S. share of the world market is expected to fall in 1989/90 as competitor production recovers. Production in Argentina should rise sharply with the return of more normal weather, and South Africa has a large carryover from 1988/89. World coarse grain trade in 1989/90 is not expected to change from 1988/89, but U.S. exports are forecast down 7 percent to 59 million tons.

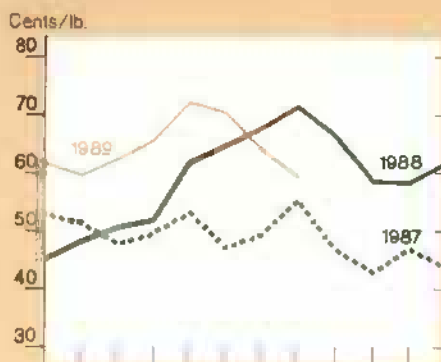
The 97 million tons of world coarse grain trade expected in 1989/90 is about 13 million above the 1985/86-1987/88 average. The main reason is forecast

Commodity Market Prices

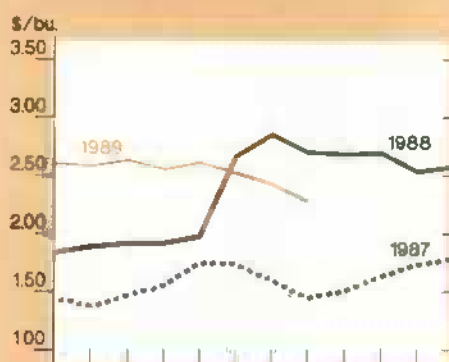
Choice steers, Omaha



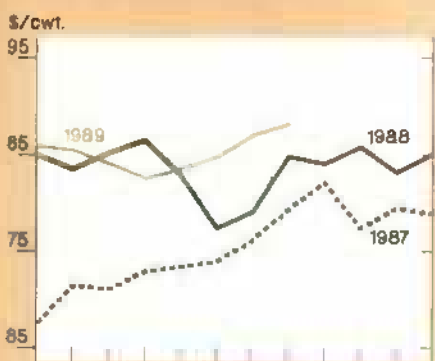
Broilers, 12-city average



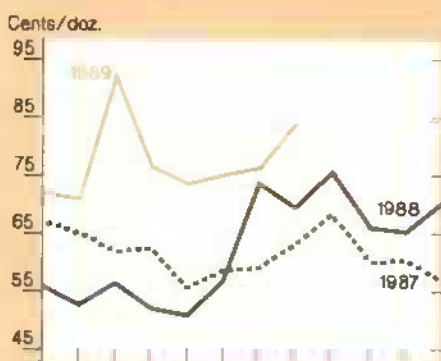
Corn, Chicago³



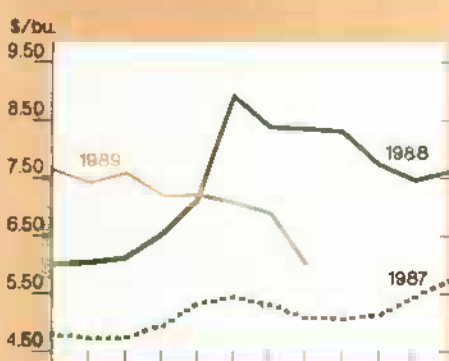
Feeder cattle, Kansas City¹



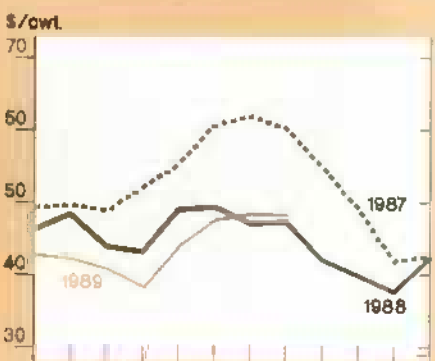
Eggs, New York²



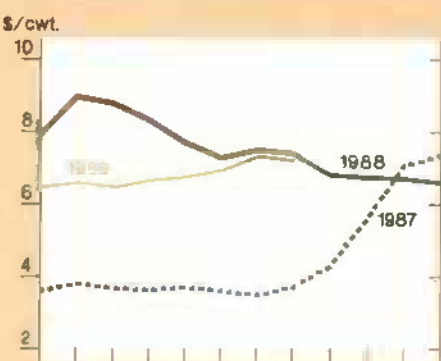
Soybeans, Chicago⁴



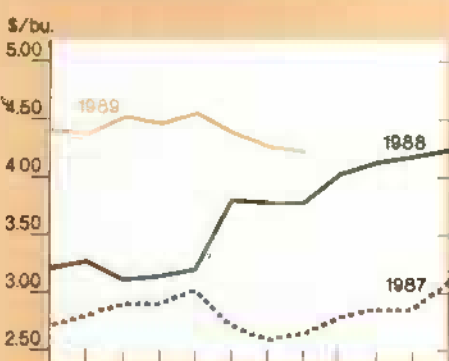
Barrows and gilts, 7 markets



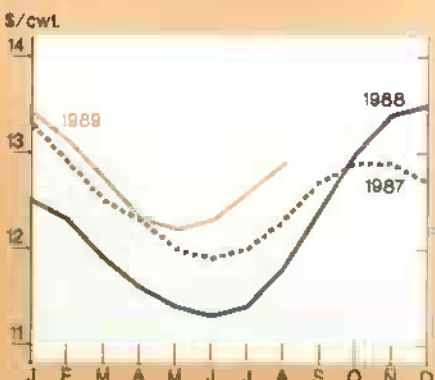
Rice (rough), SW Louisiana



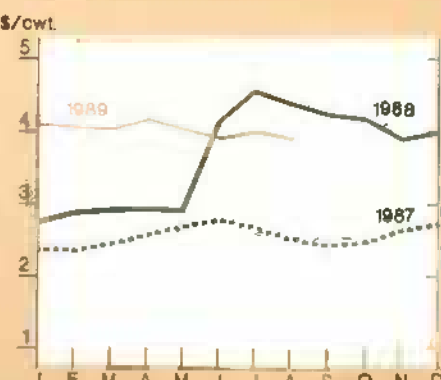
Wheat, Kansas City⁵



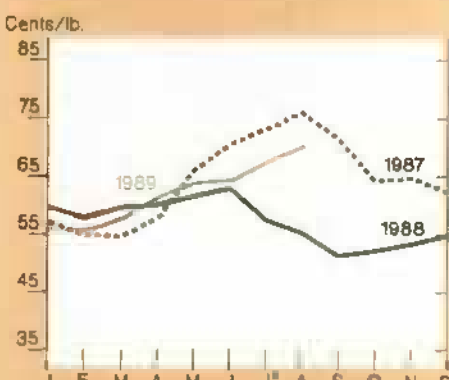
All milk



Sorghum, Kansas City



Cotton, average spot market



¹600-700 lbs., medium no. 2

²Grade A large.

³No. 1 yellow.

⁴No. 2 yellow.

⁵No. 1 HRW.

larger Soviet purchases, in turn caused by a growing demand for meat and cutbacks in imports of wheat for feed. Demand in most other markets is flat or down. Japan, once a consistent coarse grain growth market, has shown no growth over the last 2 years, largely because restrictions on meat imports have been relaxed.

Large Supplies Weaken Soybean Prices

Led by the recovery of U.S. soybean production, the 1989/90 world oilseed crop may hit a record 213 million tons. A record Southern Hemisphere crop is expected, although planting there is still several months away, and shifting policies are adding to uncertainty. With a larger supply, crush and trade in oilseeds and products are projected to increase, and prices will average well below those of 1988/89.

Reflecting short soil moisture, this year's U.S. soybean crop has been more vulnerable than usual to the weather. This has heightened price variability. Parts of the western Corn Belt experienced dryness early in the growing season. Crop maturity in the eastern Corn Belt is behind normal because of excessive rain in late spring and early summer. As a result, crop quality and yields are less certain.

Soybean prices received by farmers for marketing year 1989/90 are estimated to average \$4.75-\$6.25 per bushel. This is significantly lower than the estimate of \$7.35 for 1988/89, signaling a return to a more normal supply situation. Monthly average soybean prices received by farmers have trended downward from a \$7.59 high in January.

U.S. Peanut Crop Sets Record; Cotton Supplies Tight

The largest planted acreage since the 1950's and the highest yields since 1985 are expected to produce a record U.S. peanut crop of 4.44 billion pounds this year. Generally favorable growing conditions in the major production regions are expected to raise yields to 2,688 pounds per acre, 10 percent higher than last year. Plentiful peanut supplies likely will limit upward price pressure during the 1989/90 marketing year.

The 1988/89 peanut marketing year concluded July 31, with domestic food use

up 8 percent to a record 2.24 billion pounds.

World and U.S. cotton prices moved higher last season because of strong foreign and domestic mill demand and tight foreign stocks. Weather-related production problems in the U.S., and the prospect of no increase in foreign production, have continued to support prices. The average spot price for SLM 1-1/16 inch cotton reached 67 cents per pound in July, up from 57 cents a year earlier. And the adjusted world price (the U.S. equivalent of the world price) rose throughout July to almost 68 cents, compared with 52 cents a year earlier.

The 1989 U.S. cotton crop is forecast at 12.3 million bales, 20 percent below a year earlier. Planted acreage of 10.5 million was 16 percent less than in 1988, while the forecast yield of 618 pounds per acre is virtually identical to the previous year. The total U.S. cotton supply is projected at 19.4 million bales for 1989/90, almost 2 million below the previous season.

Domestic U.S. mill consumption in 1989/90 is expected to reach 7.7 million bales, up from 7.6 million last year. This gain reflects strong consumer sales, lower textile inventories, and strong demand for denim.

Foreign import demand is up; world textile markets remain strong. Conditions in foreign exporters include unchanged production, lower beginning stocks, and higher consumption, so the U.S. market share should rise sharply.

U.S. cotton exports are projected to total 7.8 million bales, 25 percent over 1988/89. This gain, together with larger domestic consumption, is forecast to bring U.S. ending stocks on August 1, 1990, down to 3.9 million bales. *[Joy Harwood and Frederic Swirls (202) 786-1840]*

For further information, contact: Sara Schwartz, world food grains; Edward Allen, domestic wheat; Janet Livezey, domestic rice; Pete Riley, world feed grains; Larry Van Meir, domestic feed grains; Bob Cummings, world oilseeds; Roger Hoskin, domestic oilseeds; Carolyn Whitton, world cotton; Bob Skinner, domestic cotton; Jim Schaub, domestic peanuts. World information (202) 786-1824; domestic (202) 786-1840.

Specialty Crops Overview

The contracted area for the five major processing vegetables (green beans, sweet corn, tomatoes, peas, and cucumbers) is up 14 percent in 1989 from the year before, and up 15 percent from 1987. Contracted tomato production this year is up 32 percent from last year. In 1988, contracted tomatoes accounted for 98 percent of total processing tomato output. Prices for processed tomato products have been holding steady despite the higher production.

Consumption of 15 major fresh and processing vegetables fell slightly in 1988, primarily because of reduced use of canned vegetables, especially tomatoes. Consumption of fresh and frozen vegetables continued rising. Prospects for a larger tomato crop portend a rise in total vegetable consumption in 1989 and 1990.

U.S. tree nut production will be down sharply in 1989 because of smaller crops of almonds, filberts (hazelnuts), pecans, and pistachios. Almond production is estimated at 425 million pounds (kernel weight), down 28 percent from 1988. Despite the lower output, the supply for the marketing year (July-June) will be nearly the same as the year before, reflecting large beginning stocks. Growers' prices may be up slightly from 1988/89.

Fewer Pecans, Pistachios Expected This Year

Pecan production is forecast at 245.8 million pounds (in-shell basis), 20 percent below 1988. Pecans are an alternate-year bearing crop, and production in 1988 was 308 million pounds, a relatively large crop.

Pistachios also bear more heavily in alternate years, and 1988 was a record for U.S. production. Consequently, prospects for 1989 are for a smaller crop. First estimates indicate output of 28 million pounds, in-shell.

Walnut output is estimated at 210,000 tons, in-shell equivalent, 2 percent higher than in 1988. Strong export demand likely will keep prices firm.

Fresh Vegetables Lead Expansion

Over the last 18 years, growth in fresh use has led overall vegetable use, rising 2 percent per year since 1970. Fresh use, 70.6 pounds per person in 1970, reached 100.3 pounds in 1988. Higher incomes and greater emphasis on fresh vegetables' health benefits likely have driven the increase.

Frozen vegetable consumption also has been rising, but at a slower pace. Per capita consumption of frozen vegetables rose an average 1.5 percent per year between 1970 and 1988, from 13.5 to 17.5 pounds.

Part of the growth in fresh and frozen consumption has come at the expense of canned vegetables. Consumption of canned vegetables was 91.4 pounds per person in 1970, but fell to 87 pounds by 1987. Although canned use dropped to 82.8 pounds per person in 1988, partly because of drought-reduced tomato, green bean, sweet corn, and green pea crops, it likely will return to about 87 pounds in 1989.

Not all vegetables are included in consumption estimates. Many vegetables, including cabbage, peppers, spinach, squash, and eggplant, are excluded because estimates of their total production are unavailable. Potato, sweetpotato, mushroom, dry pea, and lentil consumption are estimated separately.

Mushroom Industry Still Growing Despite Foreign Competition

Despite intense competition from China, Taiwan, and Hong Kong in canned mushrooms, strong growth in domestic demand for fresh mushrooms is sustaining the U.S. industry.

U.S. production rose 6 percent in marketing year 1988/89 (July-June) from the year before. Per capita consumption of all mushrooms climbed from 1.3 pounds in calendar 1970 to 3.5 in 1988. Imports supplied 50 percent of U.S. canned mushroom consumption in 1988, compared with 37 percent 10 years earlier.

The U.S. industry has shifted from producing primarily for processing to mainly fresh use. Back in 1970-71, 28 percent of U.S. mushroom production

was marketed for fresh use; the remainder was for processing. By 1988-89 the proportions were reversed, 72 percent for fresh use and 28 percent for processing.

Fresh market sales of domestic mushrooms grew an average of 7.7 percent per year during the last 10 years, whereas volume of processing sales diminished by 2 percent annually. The overall effect was about 4 percent average annual growth for total mushroom production.

Fresh mushroom consumption grew from only 0.3 pound per person in 1970 to 2.0 pounds in 1988. Per capita consumption of processed mushrooms rose from 0.9 pound per person in 1970 to 1.5 pounds in 1988. Fresh use has been boosted by the increased popularity of salads and fresh vegetables. Exotic mushrooms (shiitake, oyster, and others) have gained a wider audience, also contributing to the growth in fresh consumption.

Mushroom imports, mostly canned, have nearly doubled since 1975 and more than supplied the growth in domestic consumption. Consequently, domestic sales of mushrooms for processing have fallen. Mainland China is the major source of canned mushrooms exported to the U.S., supplying 56 percent in 1988.

Increased Production Drops Catfish Prices

The quantity of catfish processed during the first 7 months of 1989 rose 16 percent over the same period in 1988, raising processors' inventories of frozen fish and lowering both grower and processor prices. The area in catfish ponds grew 8 percent in 1989, indicating the industry's intentions to continue expanding.

Grower prices fell in July to 71 cents per pound, 9 cents below a year earlier. Although grower prices remained relatively steady at 75 to 78 cents per pound during the first half of 1989, prices have been gradually slipping for nearly a year. Farm-raised catfish output grew 5 percent in 1988.

Larger inventories of live catfish indicate that production likely is continuing strong during second-half 1989. As of July 1, grower inventories of food-size fish were up only 3 percent from a year earlier, but inventories of fry-fingerlings

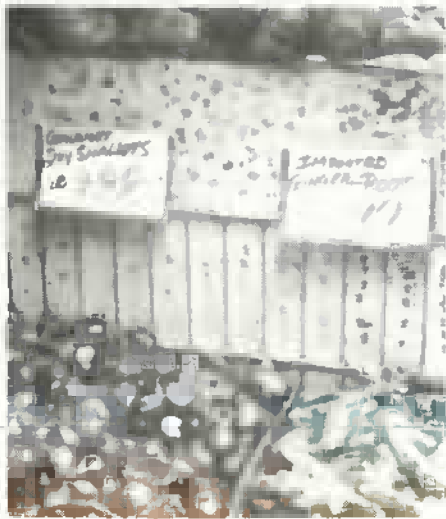
were up 38 percent. In addition, July 1 hatchery inventories of broodfish were up 40 percent from a year earlier, while stocker and fry-fingerling inventories were each up 29 percent. The increases will keep downward pressure on prices.

Most pond area growth is occurring in Mississippi, Arkansas, Alabama, and Louisiana. These States account for 91 percent of U.S. catfish pond acreage. Despite the rise in acreage, the number of growers fell 9 percent during 1989. [Glenn Zepp and Catherine Greene (202) 786-1883]

For further information, contact: Kate Buckley, fruit; Shannon Hamm, vegetables; Peter Buzzanell, sweeteners; Verner Grise, tobacco; Doyle Johnson, tree nuts and greenhouse/nursery; David Harvey, aquaculture. All are at (202) 786-1883.

Upcoming Economic Reports

Summary Released	Title
October	
12	World Ag. Supply & Demand
19	Dairy
20	Agricultural Outlook
23	Rice
	Livestock & Poultry Update
25	Foreign Ag. Trade Update
26	Oil Crops
27	National Food Review



Commodity Spotlights

Herbs Take Off

Newly released 1987 Census of Agriculture estimates reveal dramatic increases in U.S. herb farming. Acreage for most herbs increased 122 percent during 1982-87, and quantity harvested jumped 248 percent.

In the U.S., herbs now go to uses as diverse as cooking, landscaping, bridal wreath creations, and "aromatherapy." Foodservice and retail suppliers are currently forming herb divisions, enlarging their herb-growing operations and building new high-tech packinghouses for herbs.

Concurrently, the associations that provide support for herb growers and suppliers are rapidly expanding their membership. The International Herb Growers and Marketers Association has more than doubled its membership from 450 only 3 years ago to 1,050 today.

Marketing Channels Are Diverse

Major marketing channels exist for fresh and dried culinary herbs, potted plants and decorations, food and medicinal products, and fragrances. Sometimes the same herb can be marketed through several channels. For example, both fresh and dried rosemary is available in some supermarkets; it is also sold as a potted

plant at herb garden nurseries, and can be found in Christmas wreaths at farmers' markets during the winter.

Garlic is also sold for culinary uses, as a dietary supplement, and braided with dried flowers for sale as a decoration in upscale kitchen boutiques and farmers' markets.

Feverfew is used in herbal landscaping design, and a recent article in *The Lancet* reports that it may be effective in preventing migraine headaches.

Other examples include jasmine, which is used in teas as well as high-grade perfumes, and foxglove, which is used as both an ornamental plant and in the cardiovascular drug digitalis.

Most of the culinary herbs are used primarily as food flavorings. Herbs are aromatic plants grown in temperate regions, as distinct from spices, which are grown in the tropics.

Fresh-Cut Herbs Are Growth Industry

Fresh culinary herbs for the retail market and foodservice industry form one of the fastest-growing segments of the U.S. herb industry. In the past, fresh culinary herbs were used mainly in expensive restaurants and by those with herb gardens at home. Now they are becoming available in supermarkets, farmers' markets, and moderately priced restaurants. Wider availability reflects, in part, improved production, storage, and marketing techniques.

According to *The Packer's* 1989 consumer survey, the top five fresh herbs in consumer recognition are garlic (95 percent of respondents), parsley (86 percent), dill (67 percent), chives (66 percent), and ginger root (59 percent). A majority of the respondents had bought these five herbs.

More than half of the surveyed consumers had seen or heard of fresh basil, while a third or more had seen or heard of fresh mint, horseradish, oregano, sage, thyme, rosemary, and anise. Twenty-seven percent recognized cilantro and marjoram.

Census Estimates Show California Is Top Grower

The scale of herb-growing operations ranges from hobby farmers and backyard nurseries in congested urban areas to open-air farms with more than several hundred acres.

The Census reports separate estimates for the number of farms and harvested acreage for six herbs: garlic, parsley, watercress, ginger root, dill for oil, and mint for oil. An estimate of "all other" herb acreage is also reported. Estimates reflect both fresh-market and processing uses, except for dill and mint, which do not include acreage for fresh and dried products.

California leads in garlic and parsley acreage according to the Census, and Florida has the most watercress acreage, while Hawaii is the only U.S. producer of ginger root. Washington State leads in dill acreage, and Oregon has the most mint acreage.

Although 1987 California garlic acreage was down slightly from 1982, the previous Census year, State reports indicate that production has trended up. Annual U.S. consumption is likely over a pound per person now, up from 0.6 to 0.8 pound in the early 1980's.

Acreage and production of ginger root and dill are also up. Census estimates show 1987 Washington dill acreage up 107 percent from 777 acres in 1982, and production up 159 percent from the 63,263 pounds produced in 1982. State reports indicate that Hawaiian ginger root production and acreage have been trending up since the early 1980's, and production is forecast at 8.2 million pounds for the 1989 season.

According to the Census, California is also the top U.S. producer in the "all other" herbs category, which includes fresh culinary herbs such as basil, chives, thyme, and rosemary (dill and mint acreage for dried and fresh use is also reported in this category). The number of California farms producing these herbs more than doubled between 1982 and 1987, from 33 to 73; harvested area increased 29 percent to 1,675 acres, while quantity produced increased 273 percent to over 6 million pounds.

These estimates include dried herbs grown on contract with U.S. spice companies. But much of the increase in California acreage is likely for fresh herbs, reflecting the escalating demand for the fresh product. The California gain probably does not reflect the total increase, since greenhouse herb production is not estimated. California greenhouse production has been expanding to provide fresh herbs all year.

Wisconsin Grows Ginseng For Asian Market

Wisconsin is the second largest U.S. producer of herbs in the aggregate category. Wisconsin's harvested acreage increased 175 percent during 1982-87 to 1,135 acres. Quantity produced grew 178 percent to 1.1 million pounds.

However, most of Wisconsin's herb acreage is for cultivated ginseng, not culinary herbs, and most of the crop is exported to Asian countries, where it is used as a medicine.

Ginseng also grows wild in other parts of the U.S., especially in the Appalachian Mountains. Most is exported. In 1988, total U.S. cultivated ginseng exports amounted to 847,071 pounds, while wild ginseng exports reached 141,017 pounds.

Ginseng is an extremely high-value product, with recent prices reaching a high as \$51.50 per pound for cultivated ginseng and \$275 per pound for wild.

Herb Imports Increasing

U.S. imports of fresh herbs are also up, according to USDA's Animal and Plant Health Inspection Service. These imports are for both the fresh market and for processing. Total imports of 17 herbs shipped fresh into the U.S. increased to 14 million pounds in fiscal 1987, up 6 percent from 1986 and 22 percent from 1985. The largest herb imports in 1987 were garlic (7.8 million pounds), cilantro (3.6 million), ginger root (1.2 million), oregano (656,282 pounds), and parsley (529,377 pounds).

Continued improvements in marketing fresh herbs are likely. Decorative, landscaping, food, and fragrance industry uses will probably expand. And new reg-

ulations on medicinal herbs may be considered as the herb industry experiences rapid growth.

Interest in herbs has increased so dramatically in recent years that USDA began a weekly report on the herb market this year. The first "National Wholesale Herb Market News Report" was issued on May 3, and is available from the Chicago Market News office. Call (312) 353-0111 for details. [Cathy Greene (202) 786-1886]

Triticale: Has Its Time Finally Come?

Triticale is a high-yielding blend of wheat and rye. Its origin is shrouded, but it has been around for over 100 years. While almost unknown in the U.S., triticale is planted on several million acres worldwide.

Many of the genetic difficulties that have plagued triticale over the years have been overcome, though uniform end-use characteristics are still something of a problem. Newly developed dwarf and other short-stemmed varieties have taken care of lodging (stem breaking) and other harvest difficulties.

Triticale crop yields equal or surpass wheat when grown in similar settings. New varieties are quite a bit more disease resistant than early strains. Conditions seem favorable for triticale's wider acceptance.

Triticale has the potential to increase world grain production because it can be grown under conditions that are inadequate to consistently grow standard high-yielding grains. It is highly drought resistant and thrives in many marginally productive soils.

Triticale Not New

In the 19th century, as now, cross-pollination occurred naturally, notably in adjacent fields of wheat and rye. In fact, it has been a common cultivation practice in parts of Europe not to separate plots of rye, barley, and wheat. However, the resulting hybrid seeds were small and sterile. Also, yields were low, and the plants were quite susceptible to diseases. Uses of this crop were nonexistent.

In 1876, plant breeder Alexander Wilson became the first to study the crop when he cross-pollinated wheat and Scottish rye. But the result again produced sterile offspring.

In the 1950's, researchers at the University of Manitoba became interested in triticale as part of an effort to combat leaf diseases that were plaguing durum wheat. Rye's natural defenses against such diseases contributed to triticale's development as a useful crop. Triticale's sterility problem was overcome in the 1950's and seeds were developed for distribution, though many other difficulties remained.

Research on triticale also progressed in Europe. On a limited basis, some experiments took place in the U.S. as well. A big boost for serious long-term plant development came in 1964 when Manitoba and the International Maize and Wheat Improvement Center (known as CIMMYT) joined forces.

Still, research progress was very slow until the key breakthrough came about by accident. In 1967, a portion of a CIMMYT test crop in Mexico was unintentionally pollinated by dwarf bread wheats from nearby fields.

The resulting strain of triticale, known as *arnadillo*, appeared to solve most of the crop's problems at once. The new crop was high yielding, short stemmed, disease resistant, and early maturing.

Today, although CIMMYT estimates that triticale is planted on over 4 million acres worldwide, area is relatively small in the U.S. Only 60,000 acres of both spring and winter varieties are grown here. Over two-thirds of the global triticale cropland is now made up of winter varieties in France, the USSR, and Poland. Thus, most of the current triticale is grown in developed countries on fairly good cropland. But agronomic studies indicate it also may outperform wheat and rye in marginal conditions—such as those in some food-aid countries.

Inconsistent Quality Is a Problem

Under neutral or favorable conditions, today's triticale is able to match or surpass most of wheat's key vitamin, mineral, and protein levels, although its quality is still inconsistent. Protein levels, for example, can vary by as much as 50 percent in a single year, making the crop unreliable for certain users.

Triticale, however, can produce a crop under conditions in which many wheat varieties would die. Other early triticale difficulties (few seeds, typically shriveled) recently have been overcome.

However, under marginal growing conditions, where the crop would be the most beneficial, low test weights remain a concern. Research on new varieties is underway in Mexico in the hope that flour yields for triticale and wheat grown in difficult conditions can be made equal.

Triticale's high nutritional value and milling capability qualify it as a grain that can be used for food purposes. Protein levels average over 11 percent, on par with many other cereals. In lysine, an essential amino acid that improves vegetable protein utilization in animals, it ranks better than other grains.

Triticale flour has many baking uses. These include unleavened specialty breads and other baked goods that typically rely on soft-wheat flours, such as pastas, cakes, and cookies. Triticale bread, depending on the plant variety, rises to the same level and consistency as breads made with many soft wheat strains. In the 1980's, triticale has become wholly substitutable for wheat flour in many products. Low gluten content remains a major problem for some baking uses, though.

Triticale has nonbaking food uses as well, including breakfast cereals. It is already used in many South American nations as a malting agent for beer.

It is likely that in the future, the bulk of triticale supplies will be channeled into feed uses (either as a substitute for more traditional coarse grains or as a grazing crop). Studies indicate a feed energy content for triticale lower than that for corn, but comparable to wheat and other coarse grains for most animal types.

In terms of yield and disease resistance, the forage and silage qualities of triticale can now compete with many other locally grown crops, making it cost competitive with oats, rye, barley, and wheat as an ingredient in feed rations. Some winter varieties are already used for hay on a large scale in the Southern Hemisphere.

Triticale's Future May Be Aided by Famines

Triticale is still an unfamiliar crop in most places. Further, its use would require modifying farming and milling practices.

Some growth, nonetheless, could occur soon. CIMMYT research has found triticale to be more adaptable to difficult conditions than wheat, particularly in drylands, tropical highlands, and acid soils found in many developing countries. Weather- and soil-related harvest failures in such countries could be partially avoided if more triticale acres were planted.

Lessons learned from crop-failure calamities may move growers to alter cropping patterns to include triticale. Over time, farmers, particularly in Eastern Europe, Latin America, and Africa, may well place greater emphasis on what is increasingly considered a reliable, high-yielding crop. *[James Cole and Stephanie Mercier (202) 786-1840]*

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World Agriculture and Trade

European Developments

The Beef Hormone Ban: Limited Progress

Because more U.S. beef was shipped to the EC, the Office of the U.S. Trade Representative (USTR) in July announced a \$300,000 reduction in the U.S. retaliation against the EC hormone ban. Additional reductions are expected soon because more shipments of U.S. beef and products have entered EC ports.

These actions have reduced the 100-percent tariff imposed by the U.S. on EC pork hams and shoulders (valued at \$300,000), and may cut the tariffs on other products.

The U.S. beef shipments have been made under a May 4 interim agreement between the U.S. and the EC through a Joint Task Force on the hormone dispute. Under the agreement, the EC inspects the beef processing facility while producers self-certify that the meat is derived from animals not treated with hormones; USDA provides health certificates unrelated to the hormone issue.

Despite recent increases, shipments made under the agreement likely cannot make a sizable dent in the estimated \$100-million damage to the U.S. beef trade because of strict EC guidelines and economic disincentives.

A U.S. producer must follow a series of specific measures to qualify for beef shipments to the EC. The basic requirements include the following:

- The producer must provide a legal affidavit that the meat comes from animals not treated with hormones.
- The producer agrees to random on-site inspections by EC officials.
- Except for offals (internal organs), beef imported by the EC must be high-quality beef (HQB). It is technically difficult for producers not using hormones in feedlots to meet the Tokyo Round GATT definition of high-quality beef, which was carefully crafted to provide levy-free access to the EC for beef graded Choice or Prime.
- The slaughterhouse must be approved by the EC; this requirement has been made more restrictive by the EC's third country red meat directive, which substantially reduces the number of U.S. meat processors eligible to ship to the EC.

The producer faces the additional economic problem of the animal's smaller weight gain (in the absence of administered hormones) but unchanged feed costs. The reduction is normally 100-150 pounds compared with an animal treated with hormones, but can be less with genetically superior animals.

Large beef producers have not found it economical to keep hormone-free animals separate from the other animals, which leaves small producers to fill the gap. And small producers are less likely to have sufficient availability for buyers at the right time.

Even if the HQB quota were filled, the estimated trade damage would still be \$55-\$60 million, which could only be made up by shipments of beef offals. It would take over 5 million cattle to supply the EC offals market, and the small amount of offals available in the U.S. to date are from those animals shipped under the HQB quota and from veal calves, which the Food Safety and

Inspection Service can test randomly and certify as free of administered hormones.

Other possibilities include the shipment of offals from older dairy cows (which have not been treated with hormones); the joint task force may consider this step.

The problem still remains that testing for hormones in mature cattle is not scientifically possible. Even if testing were possible, testing offals would be prohibitively expensive. Although the Joint Task Force will continue to search for solutions, the outcome is more likely to be a trickle, not a flood, of U.S. beef and beef products to the EC. [David Kelch (202) 786-1610]

EC Indecision Continues on Bovine Somatotropin (bST)

The EC Commission and Council of Ministers are debating a proposal to ban the use of bST, also known as bovine growth hormone, for 18 to 24 months to permit further study. bST is a naturally occurring hormone. When cows' natural bST is supplemented by injections of bST produced by a biotechnology process, they give more milk.

U.S. companies developed bST and are now ready to market it. It has been approved for use in India, Czechoslovakia, and the Soviet Union. The U.S. companies that have bST ready to market do not want the EC to delay approval, because they have said that such a delay would allow European firms and other competitors to catch up.

The U.S. dairy industry wonders whether the EC would ban imports of dairy products from bST-using countries if bST were made illegal in the EC. At stake are \$25 million of U.S. dairy product exports to the EC (1988/89 value). In 1989, about half of U.S. dairy product exports to the EC have been nonfat dry milk.

The Food and Drug Administration has not yet approved bST use for the U.S. and may not decide in 1990. The EC decision process is independent of the U.S. decision, although a favorable outcome in the U.S.—that is, FDA approval and consumer acceptance—might calm EC fears of consumer rejection.

There is resistance in the EC to approval of bST on at least three counts:

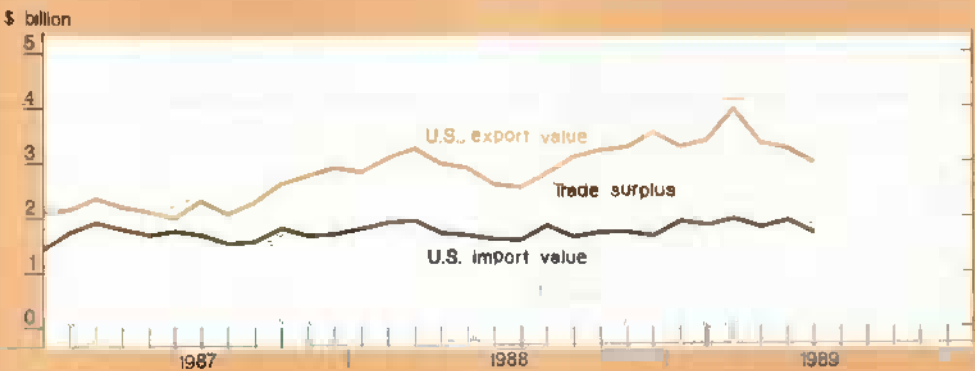
- Farmers in some countries, most apparently in Britain and the Netherlands, fear that the resulting increase in milk per cow would force some producers out of business.
- If consumers do not trust the safety of dairy products from cows administered bST, dairy sales could fall.
- Approving bST would raise an apparent contradiction with the beef hormone ban, in which even naturally occurring hormones cannot be administered to meat animals.

Weighing against these arguments are four points in bST's favor:

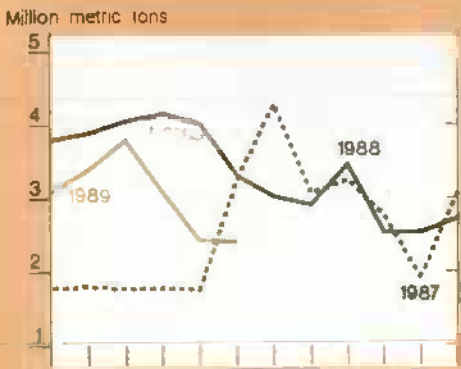
- No decisive health or technical problems have appeared that would bar its approval on normal criteria used in the EC. The growth hormone so far has met the three normal EC criteria of safety, quality, and efficacy. However, bST opponents have raised a "fourth hurdle" of social and economic effects.
- Efficiency gains would cut milk production costs.
- The EC is a net exporter of milk products, so it fears becoming less competitive in international markets by forsaking the cost-saving bST that its competitors may adopt.
- By banning bST, the Community would discourage research and development of other biotechnology. [Steve Neff (202) 786-1610]

U.S. Agricultural Trade Indicators

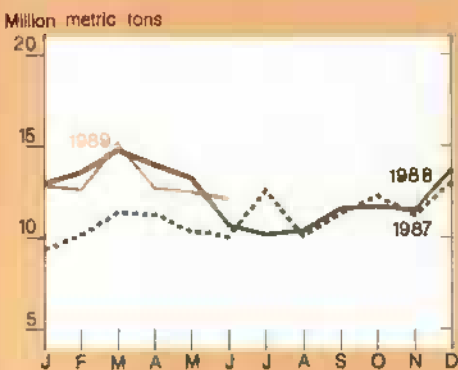
U.S. agricultural trade balance



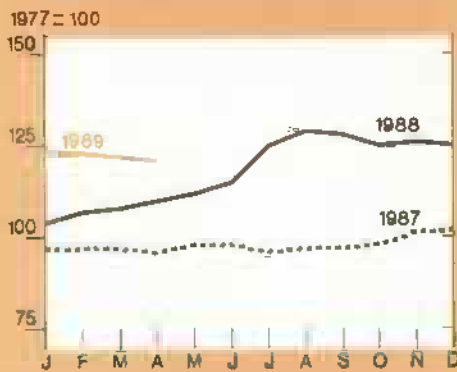
U.S. wheat exports



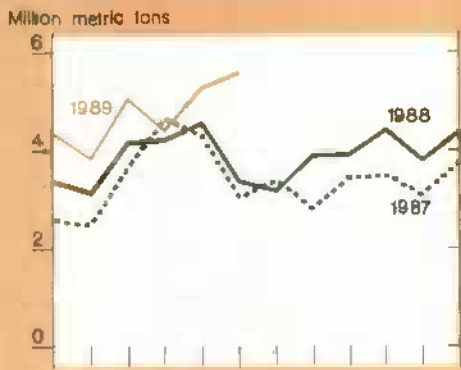
Export volume



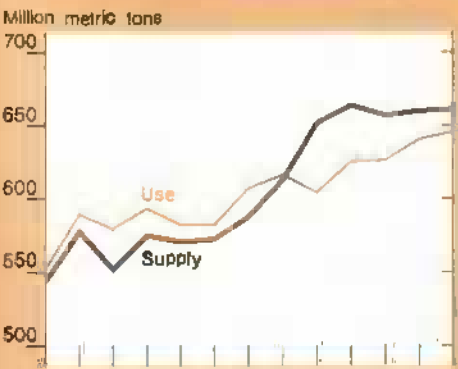
Index of export prices



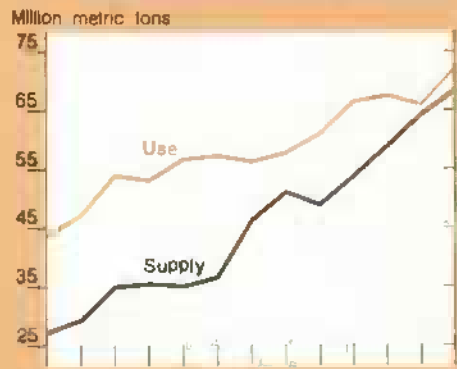
U.S. corn exports



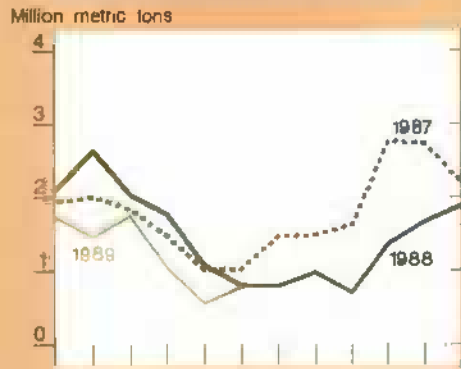
Foreign supply & use of coarse grains



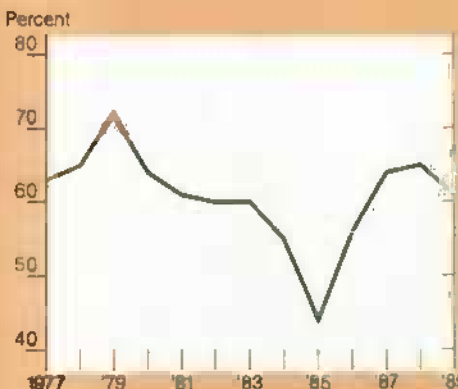
Foreign supply & use of soybeans



U.S. soybean exports



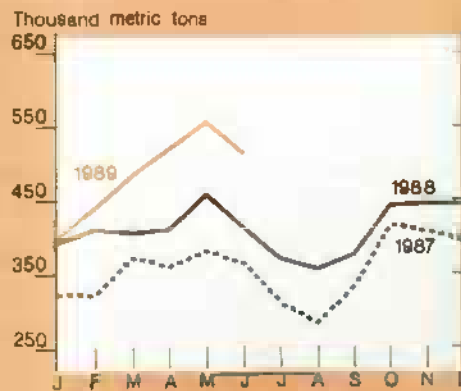
U.S. share of world coarse grains exports¹²



U.S. share of world soybean exports¹²



U.S. fruit & vegetable exports³



¹Excluding intra-EC trade. ²October-September years.

³Includes fruit juices.

EC Set-Aside Program: Off to a Slow Start

The EC Commission has recently reported that 434,310 hectares (1.1 million acres) were enrolled in national cropland set-aside programs in 1988/89. This is less than 1 percent of arable land in the EC, compared with nearly 18 percent of total U.S. cropland diverted under acreage reduction and long-term conservation programs during 1988/89.

Last February, the EC's Council of Ministers approved a plan designed to reduce cereals surpluses by paying farmers to remove all or part of their arable land from production. Although all member countries are required to implement set-aside programs, farmer participation is voluntary. Payments offered to participants range from 100 ECU's per hectare (\$48 per acre) to 600 ECU's (\$287). National governments are responsible for administering the program, and bear part of the costs.

Three countries account for 88 percent of total EC land set aside to date. West Germany, the largest participant, set aside 169,729 hectares. Italy set aside 155,606 and the United Kingdom 54,779. Results for the other member countries are significantly lower.

The Commission attributes the disappointing response in some countries to delays in implementing the scheme, inadequate efforts to inform farmers of the program's benefits, and premiums that do not effectively compensate farmers for removing land from production. Nevertheless, the Commission describes the program as being modestly successful and estimates that it reduced EC cereals production by 1 to 2 million tons in 1988/89.

In an effort to reach its goal of withdrawing 1 million hectares from production in 1990, the Commission has proposed increasing the EC contribution to the program by 32 million ECU's (\$35.6 million). This would bring EC spending on the program for 1990 up to 172 million ECU's (\$191.2 million).

The Commission also has recommended that member nations be required to ensure that the programs are well publicized, and that technical and administrative assistance be provided to farmers. [Michael Herlihy (202) 786-1610]

National Set-Asides in EC Total Less Than 1 Percent

Country	Premiums	Area set-aside	Share of arable land set aside
	ECU/hectare 1/	Hectares	Percent
West Germany	300-600	169,729	2.4
Italy	380-550	155,606	1.8
United Kingdom	270-300	54,779	0.9
Spain	100-300	34,229	0.3
France	130-350	15,707	2/
Netherlands	600	2,621	0.3
Ireland	220	1,310	0.1
Belgium	170-420	329	2/
Greece	100-250	na	na
Luxembourg	220	na	na
EC total	--	434,310	0.9

na = not available; -- = not applicable.

1/ 1 ECU = \$1,1115, average January-May 1989; 1 hectare = 2.47109 acres.
2/ Less than 0.1 percent.

Source: Commission of the European Communities.

Austrian Membership in EC Could Affect U.S. Farm Trade

After some debate, Austria has decided to apply for membership in the European Community, influenced largely by the EC's efforts to create a single market by 1992. In 1987, over 60 percent of Austria's exports were destined for the EC, and 68 percent of its imports originated there. Food and agricultural imports from the U.S., valued at \$84.2 million, accounted for only about 4 percent of Austria's total agricultural imports.

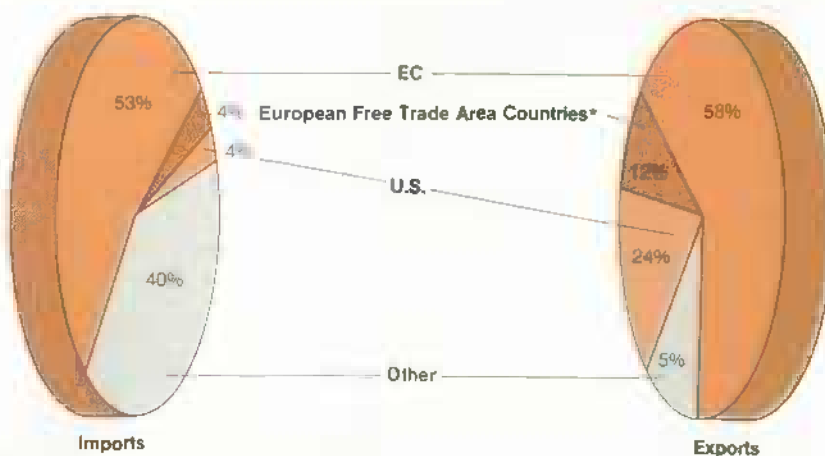
By joining the EC, Austria would not be throwing open its market for agricultural products from outside the EC. On the contrary, some trade could be diverted from the U.S.

In particular, U.S. rice exports (\$7.9 million in 1987), which now enter Austria duty free, would be subject to the EC variable levy. Also, imports of high-quality U.S. beef products (\$9 million) might be hurt by a reduced import quota or the EC hormone ban.

Austria's admission by Brussels is not certain and it probably will not be decided until after 1992. While Austria's stable currency and established trade links with Eastern Europe are in its favor, the country's neutrality could pose a problem for the EC's long-term goal of political unity.

For the U.S., Austrian accession probably would not provoke the same degree of trade friction with the EC as the accession of Spain and Portugal did. [Mary Madell and Kenneth Weiss (202) 786-1610]

Most of Austria's Agricultural Trade Is With the EC



*Finland, Iceland, Norway, Sweden, & Switzerland.

Exports Higher in Fiscal 1989, Slipping in 1990

U.S. agricultural exports likely reached \$40 billion in fiscal 1989 (October-September), a \$4.7-billion increase from fiscal 1988. This would be the highest since 1981's record \$44 billion, as higher prices offset a slight decline in volume.

But, as prices retreat from drought-induced highs and foreign competition intensifies, export value and volume are expected to slip in fiscal 1990.

Both bulk and high-value exports probably were greater in fiscal 1989, but high-value exports likely reached a record. High-value exports probably climbed \$1.9 billion, compared with a \$2.6-billion gain in 1988 and \$1.2 billion in 1987. As in preceding years, animal products accounted for the largest share of this gain, with a \$550-million increase likely in fiscal 1989.

Much of the growth in U.S. animal product exports during the last 2 years has resulted from rising imports by Mexico and Japan. U.S. animal product exports rose more than \$1 billion in 1988, and Japan and Mexico accounted for about 80 percent of the rise. Similarly, they accounted for virtually all the \$680-million increase during the first 10 months of fiscal 1989.

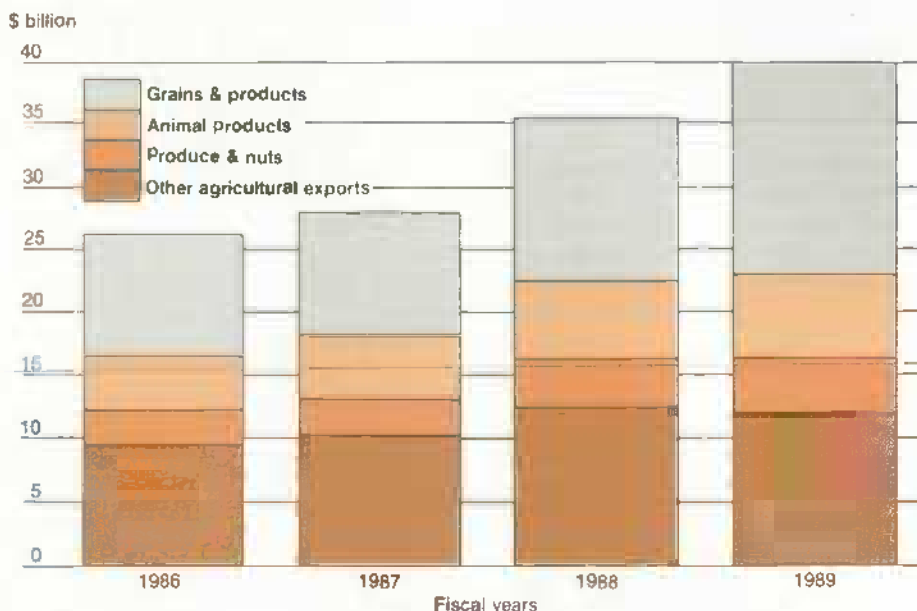
The value of U.S. animal product exports to Japan grew \$392 million during the first 10 months of fiscal 1989, largely because of expanded beef sales. U.S. beef has done extremely well in the Japanese market, continuing to gain market share partly at the expense of Australian beef, and accounting for much of Japan's increased imports.

U.S. pork exports to Japan have also been rising as Japan's own production falls. U.S. poultry meat exports to Japan likely grew as well, exceeding fiscal 1988's record, because of continued strong demand and reduced local production.

Beef Agreement, High Yen Help U.S. Exports

Japan's meat imports have been rising strongly in recent years. Export growth

Grain Export Value Climbs in 1989



1989 forecast

has been facilitated by Japan's agreement last year to raise its quota for beef imports by 60,000 tons annually, and by its tariff reductions on poultry imports. However, liberalization has not been the only factor; U.S. sales of nonquota beef to Japan, such as diaphragm meats, have increased.

A robust Japanese economy has fueled income growth; a strong yen has helped reduce the local cost of many imported goods, and the cost of importing meat has fallen faster than the cost of producing meat locally. Japan imports all but 2 percent of its animal feed, and marketing arrangements, including price stabilization, prevented a complete transmission of potential cost savings from cheaper imported feed.

Exports to Mexico Rising

In contrast to Japan, Mexico's currency and income growth have not been encouraging for imports. Instead, efforts to fight inflation have been the impetus behind increased imports of animal products and other agricultural goods during 1988 and 1989. The Mexican government recently announced an extension of its Economic Solidarity Pact, promising to control food and other prices in exchange for wage restraint.

However, Mexican producers withheld local livestock products in response to the price controls. Part of the

government's strategy to control inflation is to import food products, thereby restraining price increases and ameliorating shortages. Food items under price controls include milk, eggs, beef, corn tortillas, and wheat bread; U.S. exports of many of these products increased significantly in fiscal 1989.

Shipments of other products have risen as well under a more liberalized Mexican trade regime. Substituting tariffs for import license requirements has increased the access to foreign products in Mexico. U.S. agricultural sales to Mexico rose by \$1 billion during the first 10 months of fiscal 1989.

Import liberalization in other countries is also helping U.S. high-value exports. U.S. produce exports likely climbed \$500 million in 1989 to a record \$4.3 billion. Much of the gain is concentrated in East Asia, where import liberalization and income growth are encouraging sales.

Bulk Exports Led 1989's Growth

U.S. bulk agricultural exports probably increased \$2.8 billion in fiscal 1989, almost \$1 billion more than the likely gain for high-value exports. Higher prices for grains and oilseeds have more than offset the small aggregate decline in export volume that followed drought-reduced U.S. crops.

U.S. agricultural export volume in fiscal 1989 probably fell only 1.3 million tons to 147 million tons. A likely 9-million-ton increase in coarse grain exports virtually offset reduced wheat, soybean, and soybean meal shipments.

Coarse grain sales have climbed because of record sales to the Soviet Union—an 11-million-ton gain through the end of August. This is offsetting lower exports to Japan, North Africa, the Middle East, and Latin America.

The Soviet Union's imports of coarse grains hit a record in fiscal 1985, but U.S. exports have been higher in 1989, since competing producers have not had the supplies to meet Soviet demand. With coarse grain volume up, and prices averaging more than 20 percent higher, fiscal 1989 U.S. coarse grain exports probably will increase \$1.3 billion.

Soviet 1989/90 imports from all sources could drop in response to a rebounding domestic crop. And foreign competitors also are expected to harvest larger crops. Thus, the volume of U.S. coarse grain exports is forecast to decline in fiscal 1990, as are export prices.

U.S. Wheat Exports Lower in 1989

Wheat exports probably shrank in fiscal 1989. As with coarse grains, the Soviet Union is the largest source of the change. Fiscal 1988 wheat exports to the USSR were a record 9 million tons. But, following a better Soviet crop, 1989 exports likely held under 6 million tons. U.S. wheat exports also were probably lower to Eastern Europe and Latin America, but larger exports to Pakistan and China helped offset these losses.

U.S. wheat exports likely finished fiscal 1989 about 3 million tons below fiscal 1988's 40 million, but with prices driving export value \$1.5 billion higher.

In fiscal 1990, world wheat prices are likely to remain stronger than corn or soybean prices. However, probable changes in U.S. export volume are less clear, since Northern Hemisphere harvests will begin midway through the fiscal year. Declining U.S. wheat exports and continued record EC exports are forecast on a crop-year basis, but the fiscal year could vary.

Fiscal 1989 soybean exports fell with reduced world trade and record competitor exports. Although world trade and U.S. exports are expected to rise in 1990, competitors may capture most of the gain, and U.S. export volume is not expected to increase by as much as prices fall.

The only bulk export likely to continue gaining in value in fiscal 1990 is cotton. U.S. cotton exports may be up only \$100 million in fiscal 1989, to \$2.2 billion, but cotton is ending the fiscal year in a far more competitive position than it held at the beginning.

With increased foreign consumption boosting import needs well above anticipated foreign export supplies, the volume of U.S. cotton exports is likely to grow substantially in fiscal 1990, with value higher as well.

U.S. Dollar Stronger on Foreign Exchange Markets

Despite improved cotton exports, the outlook is for a drop in U.S. bulk exports in fiscal 1990. Fiscal 1989 bulk product exports probably reached \$22 billion, an \$8-billion gain over 3 years of growth. During fiscal 1990, only a small portion of this gain is likely to be lost, but probably enough to bring total export value lower.

Gains in high-value exports are likely to shrink in 1990 compared with recent years, because of changes in exchange rates and economic growth. The dollar probably has entered fiscal 1990 above a year earlier in real foreign exchange terms. This would be the first such increase since fiscal 1985, and combined with the prospect of slower GNP growth overseas, implies weaker prospects for exports in 1990. *[Stephen MacDonald (202) 786-1822]*



Farm Finance

A Look at Farmers Leaving Farming

During the 1980's, farmers went through a cost-price squeeze, saw one-third of their land value evaporate, and had to work out a massive debt overhang. Yet USDA data suggest that farm numbers fell more in each of the 3 previous decades than in the eighties. Further, some surveys show that farmers' bankruptcy filings are down by 50 percent from this decade's high, which was in 1986.

Structural changes in farming in the 1980's reflect a continuation of historical trends, but at slower rates than in earlier decades that saw huge technological changes. By the 1970's, many of the productivity increases from mechanization and chemical use had already been made.

By the beginning of the 1980's, farm numbers were down, farms larger, production more concentrated, and capitalization greater than ever before; much structural change had already occurred in farming. Farm numbers declined by 266,600 during 1980-89, compared with 1.7 million during the 1950's, 1 million in the 1960's, and 516,600 during the 1970's.

But medium-sized commercial farms made up a bigger proportion of farms disappearing in the 1980's than in the earlier decades.

Although there are no exact national numbers on the rates of farm failure, some observers believe that the farm exit rate was 5 to 6 percent per year in the period of peak farm financial stress during the mid-1980's, with financial failure accounting for about half.

In a normal year, 3 to 4 percent of farm operators cease farming for a variety of financial and personal reasons. Since the mid-1980's, the exit rate has dropped back to the historical norm as the financial picture has brightened.

Best estimates suggest that some 200,000 to 300,000 farmers left farming for financial reasons between 1980 and 1988, representing 8 to 12 percent of all farmers at the beginning of the decade (or an annual average rate of 0.9 to 1.4 percent).

The number of exits from farming in the 1980's was slowed by a variety of Federal and State programs and policies; many were specially introduced in response to the farm financial crisis. Generally rising farm incomes, debt restructuring, and land value appreciation since 1986 signaled the end of the crisis. The current outlook is for no new surge of farm sector exits.

Lack of Hard Data Hinders Analysis

The concern with farm financial stress has often been stated in terms of increased farmer exits from agriculture because of bankruptcy, foreclosure, or other involuntary reasons. But there is no direct measure of how many farmers actually leave (or enter) each year. Farm numbers show the net change.

Even if there were detailed data on farm bankruptcies, challenges to analysis would remain, since farm financial stress may induce farmers to sell or transfer land voluntarily to avoid foreclosure.

Despite the lack of data, there is some related information suggesting that while farm failures are serious for those directly involved, they have little impact on the sector as a whole.

The higher rate of foreclosures and bankruptcies in the 1980's has been used to

Financial Stress in Agriculture as Reported by U.S. Farm Banks, 1982-88 1/

Item	1982	1983	1984	1985	1986	1987	1988
	Percent						
Farm borrowers who had bank financing discontinued (during year ending in June)	3.3	2.9	3.4	4.5	5.6	3.2	1.7
Farm borrowers banks expect to discontinue (during year ending next June)	4.4	2.0	3.1	5.7	6.7	2.1	1.5
Banks' farm borrowers loaned up to practical limit in June	31.9	28.1	32.8	36.7	38.8	28.8	22.6
Farmers in bank lending area who went out of business (year ending June)	2.2	2.3	3.6	4.8	6.2	4.6	2.8
Liquidation categories (sum equals 100 percent)							
Normal attrition	na	37.7	31.3	27.7	28.9	38.4	50.2
Voluntary liquidation	na	42.4	44.0	44.3	41.7	35.8	30.6
Legal foreclosure	na	18.1	22.3	25.8	26.3	23.6	17.7
Other	na	1.8	2.4	2.2	3.1	2.3	1.6
Banks' farm borrowers who filed for bankruptcy (year ending June)	na	na	na	1.5	2.2	1.4	.7
Farmers in bank lending area who filed for bankruptcy (year ending in June)	.8	1.1	2.6	3.8	4.2	3.3	2.2

na = not available. 1/ Data are unweighted averages of responses to the American Bankers Association midyear farm credit survey, which uses a stratified random sample.

suggest that the number of farms is dropping, but two additional factors must be considered.

First, using gross exits alone, without considering entries, reveals little about changes in farm numbers. Second, total exits may not move in tandem with involuntary exits. Voluntary exits may decline in a period of financial stress, as farmers contemplating retirement and others with the ability to wait for improved conditions hold their land off the market.

Some displaced farmers with good management skills re-enter the sector, renting a large share of their land and equipment. This type of transition likely increased in the 1980's.

Bankers Say Financial Stress Worst in 1985-86

A midyear farm credit survey of agricultural commercial banks conducted by the American Bankers Association (ABA) provides some information on the incidence of farmers' financial stress and on how many farmers leave farming. To qualify as a farm bank for the survey, an institution had to have more than \$2.5

million lent out in farm production and farm real estate loans, or more than half of its loans to farms.

The bankers likely focus on commercial-sized farms that are viewed as actual or potential customers, omitting small operations that meet the Census definition of a farm (\$1,000 or more annual sales). Thus, the stress rates should not be multiplied by the total Census number of farms, but instead viewed as relative indicators of stress through time.

Bankruptcies Likely Peaked in 1986

According to the survey, the worst financial stress in agriculture occurred in 1985-86. The respondents quit lending to 5.6 percent of their farm borrowers during the year ending June 1986, after dropping 4.5 percent of their farm borrowers in 1985. In another measure of creditworthiness, the proportion of farm customers who had borrowed up to their practical limit peaked at 38.8 percent in mid-1986; for comparison, as of mid-1988 only 22.6 percent were at the limit.

Agricultural bankers estimated that 6.2 percent of farmers in their lending areas

Number of U.S. Farms, Land in Farms, and Average Farm Size, 1910-89

Year	Number of farms 1,000	Land in farms Mil. acres	Average farm size Acres	Period	Change		
					Number of farms		Av. annual % change
					1,000	%	
1910	6,406.2	878.8	137	---	---	---	---
1920	6,517.5	958.7	147	1910-20	111.3	1.7	0.17
1930	6,545.6	990.1	151	1920-30	28.1	0.4	0.04
1940	6,349.8	1,065.1	168	1930-40	-195.8	-3.0	-0.30
1950	5,647.8	1,202.0	213	1940-50	-702.0	-11.1	-1.11
1960	3,962.5	1,175.6	297	1950-60	-1,685.3	-29.8	-2.98
1970	2,949.1	1,102.4	374	1960-70	-1,013.4	-25.6	-2.56
1980	2,439.5	1,038.9	426	1970-80	-509.6	-17.3	-1.73
1989	2,172.9	991.5	456	1980-89	-266.6	-10.9	-1.21

Sources: All data derived from USDA, NASS except for 1910-40 land in farms, which were obtained from the U.S. Census of Agriculture.

went out of business during the year ending June 1986, up from 4.8 percent a year earlier. About 68 percent of those exiting in 1986 were thought to have left because of liquidation or foreclosure, slightly less than the 70 percent of 1985.

The bankers estimated that 4.2 percent of local farm operators filed for bankruptcy during July 1985-June 1986, compared with 3.8 percent reported for July 1984-June 1985. They also reported the highest bankruptcy rate for their own customers, 2.2 percent, during July 1985-June 1986.

Farm Numbers Drop 10.9 Percent During 1980-89

The 10.9-percent drop in total farm numbers from 1980 through 1989 is comparable to the 1940's, when 11.1 percent left the sector. In intervening decades, relative declines were much greater. Average farm size increased only 7 percent during 1980-89, the lowest rate of increase since the 2.7 percent of the 1920's. This compares with the record 39.4-percent increase recorded in the 1950's.

Changes in the distribution of farms based on both per-acre size and annual sales show that the decline in farm numbers was concentrated in middle-sized operations. Both small noncommercial farms, with family members earning a large share of their income from off-farm sources, and large commercial farms are increasing as a proportion of all farms.

The 1980's farm financial crisis was more a challenge of absorbing large losses in land values than an income

problem. Farmers who incurred large debts to expand in the late 1970's found their financial position undercut by declining land values in the 1980's. Some of the farmers could support their debts only when land values were rising.

When land values fell, debt often exceeded asset values, and the farmers often could not get more credit or support their existing debt. Farmers' financial positions were thus extremely diverse, with farms of all sizes becoming insolvent.

The failure of significant numbers of larger farms in the 1980's differs from the attrition patterns from farming for the preceding decades. But with land values now increasing, the number of farms going out of business is down. [Jerry Stam (202) 786-1892]

Final estimates for 1988 show that farmers' net cash income was almost \$60 billion, a gain of \$2.2 billion (4 percent) from 1987. The combination of drought-induced higher commodity prices, large stocks going into the drought, and Federal disaster assistance pushed up the aggregate cash income indicator. Net cash income measures, for a calendar year, the sales of commodities, direct Government payments, and other farm-related income such as cash from custom farm work, less cash outlays.

In 1989, net cash income could decline \$3-\$8 billion (5-13 percent). After adjusting for inflation, net cash income (measured in 1982 dollars) is likely to be down compared to the previous 3 years, but still higher than in 1985.

Commodity receipts are expected to grow by \$6 billion this year, but the gain will be partially offset by a \$4-billion decline in direct Government payments. Crop production is up this year, but only commodities sold before the end of the calendar year will contribute to 1989 cash receipts. Cash production expenses will probably increase by \$1 billion more than commodity receipts. So net cash income could slip by \$5 billion.

Net Farm Income Increasing

Net farm income measures the value of the current year's production, plus Government payments, less total costs. Last year's drop in production lowered net farm income by 3 percent from 1987. With crop production ahead of last year's drought-reduced level, net farm income could increase by 5 to 16 percent this year, to between \$48 and \$53 billion. Measured in inflation-adjusted dollars, 1989 net farm income could match 1987's \$40 billion, the highest since 1975.

Direct Government Payments Down This Year

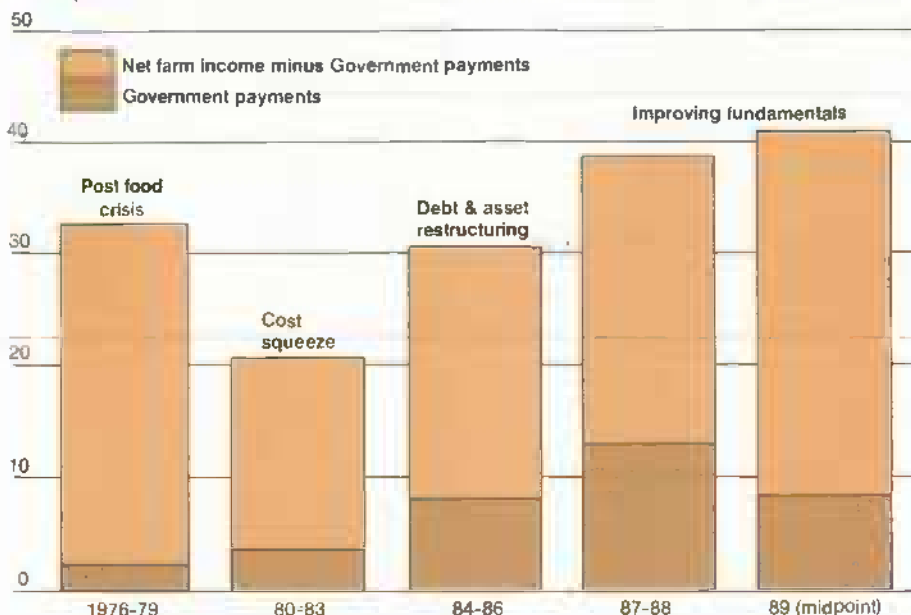
Direct Government payments for 1989 may be as much as \$4 billion less than last year, down by one-fourth. Cash deficiency payments likely will be higher for practically all program crops. However, payments made with commodity certificates will be almost negligible compared to 1987 and 1988. In 1987/88, about half of all deficiency payments were made with certificates.

Total deficiency payments for wheat, corn, and sorghum this calendar year could drop by \$5 billion. Wheat payments will be lower, as reduced stocks keep prices relatively strong. Corn and sorghum payments made in March for the 1988/89 crop year were down 95 percent from a year earlier, reflecting drought-induced high prices.

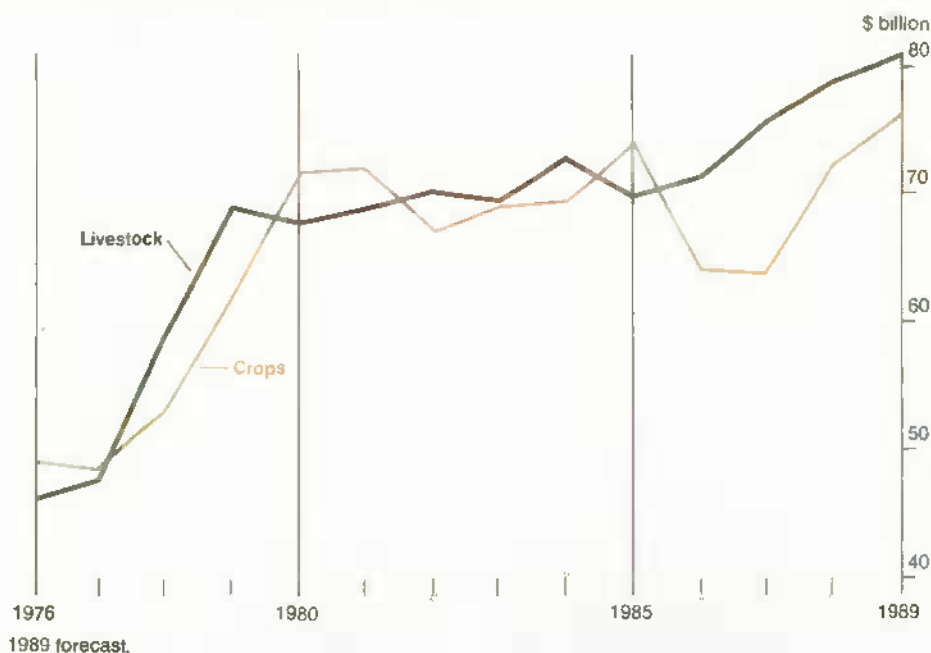
Participation in the 1989/90 programs is down 7 to 14 percent from a year earlier for wheat, corn, and sorghum, but is unchanged for rice and cotton.

Net Farm Income Is Rising, Even With Lower Government Payments

\$ billion (1982)



Farm Cash Receipts Continue To Rebound



Rice and cotton deficiency payments together may rise nearly \$1 billion, even though target prices for 1989/90 rice and cotton are lower. Deficiency payments for these two crops are expected to show an increase in 1989 because 70-85 percent of 1988/89 crop payments are made this calendar year.

Conservation Reserve Program payments and disaster assistance are two types of

direct payments that are unlikely to decline during calendar 1989. During the eighth signup period for the Conservation Reserve Program (which ended in February), another 2.5 million acres were enrolled, bringing the total to 30.6 million. Rental and cost-share payments could exceed last year's by almost \$200 million.

The Disaster Assistance Act of 1988 provided \$1.3 billion in direct payments in

calendar 1988 and another \$2.3 billion during 1989. An additional \$580 million may be dispersed in 1989 as part of this year's \$897-million disaster assistance program.

Crop Cash Receipts Climbing About 5 Percent

Crop cash receipts may be 5 percent (almost \$4 billion) above 1988, because of relatively strong prices and tighter supplies. Receipts are up more than 10 percent for wheat, corn, and vegetables. However, rice, soybean, and fruit cash receipts may be down for 1989.

Despite drought damage to the winter wheat crop, total wheat receipts are expected to be almost \$1 billion more than last year. Production estimates for all wheat are 14 percent over 1988/89, reflecting higher spring wheat output. The season-average wheat price may be up 3-13 percent. Moreover, the calendar-year average price, which is used to estimate annual cash receipts, is almost 20 percent above 1988.

Feed grain cash receipts show gains of at least 15 percent in both 1988 and 1989. Despite adverse weather in parts of the Corn Belt, feed grain production is forecast up 45 percent from last year.

Corn stocks are expected to fall during the 1989/90 crop year as use exceeds production. Season-average prices are expected to be lower for the 1989/90 crop year. However, corn and sorghum receipts in calendar 1989 reflect the higher 1988/89 crop year prices.

Cash receipts for all vegetables could be up more than 10 percent this year. Aside from potatoes, vegetable production is up 12 percent; the price index is projected to be 3 percent above 1988.

Rice receipts could decline about 15 percent this year. Rice production is expected to be down slightly, and the season-average price probably will not increase enough to keep the calendar-year price above the 1988 average.

Soybean prices are expected to be lower for 1989/90, following a production gain of at least 20 percent and an expected drop in use. However, calendar 1989 prices are influenced by last season's relatively higher prices, so annual soybean

cash receipts may dip 5-10 percent. Fruit cash receipts could be down 5-10 percent with lower prices and generally stable production.

Livestock Receipts Likely Stable

Total livestock receipts are expected to be relatively stable in 1989, with an expected gain of less than 4 percent to about \$80 billion. Cattle and calf receipts may be up 3 percent, hog receipts down 3 percent, and dairy receipts up 4 percent.

Farm prices and production of cattle, calves, and hogs will probably all change by less than 5 percent in 1989. Beef production will probably decline and farm prices rise, while hog prices fall and production increases slightly. Milk production is projected to be about the same as in 1988, with a 5-10 percent increase in average annual price pushing up cash receipts.

Cash receipts from all poultry and eggs could be up about 5 percent in 1989, following a 12-percent gain in 1988. Broiler receipts could show a 7-percent increase over 1988, while turkey and egg receipts could show a more modest 3-percent growth. Higher prices and produc-

tion are forecast for boilers and turkeys for 1989. Egg production probably will drop slightly and the average farm price will rise.

Cash Production Expenses Growing More Slowly in 1989

Cash production expenses increased 7 percent in 1988 and are expected to increase 3-6 percent in 1989. Total production expenses rose 6 percent in 1988 and could climb another \$4-\$8 billion, or 3-6 percent, in 1989.

Higher prices, rather than more use, are responsible for the increase in feed expenses. Slight price gains underlie the change in feeder livestock expenditures, while seed expense is elevated by both price and quantity increases. Most of the manufactured inputs show higher prices and increased use because more acres were planted this year and more are being harvested than in 1988. However, higher prices appear to explain most of the change in pesticide expenses.

Interest expense could increase as much as 10 percent for 1989, following 6 years of declines. Short-term interest expense, for debts not secured by real estate, likely has grown. But long-term interest charges, for real estate debt, continue to

decline in 1989. Average short-term market rates likely are higher in 1989, and more operating loans usually accompany increases in planted acres and production.

Average rates on outstanding real estate loans probably are lower in 1989, as new loans replace old. Although debt levels may be unchanged at the end of 1989, interest expense estimates are based on midyear debt levels. Real estate debt in mid-1989 may have been \$2 billion less than in mid-1988. [Diane Bertelsen and Andy Bernat (202) 786-1807]

Farm Income Forecast Errors

USDA's farm income forecasts are made monthly throughout the year. The first forecast for the next calendar year is made at the Outlook Conference in the late fall. The forecast is revised each succeeding month until final estimates are made approximately 18 months later.

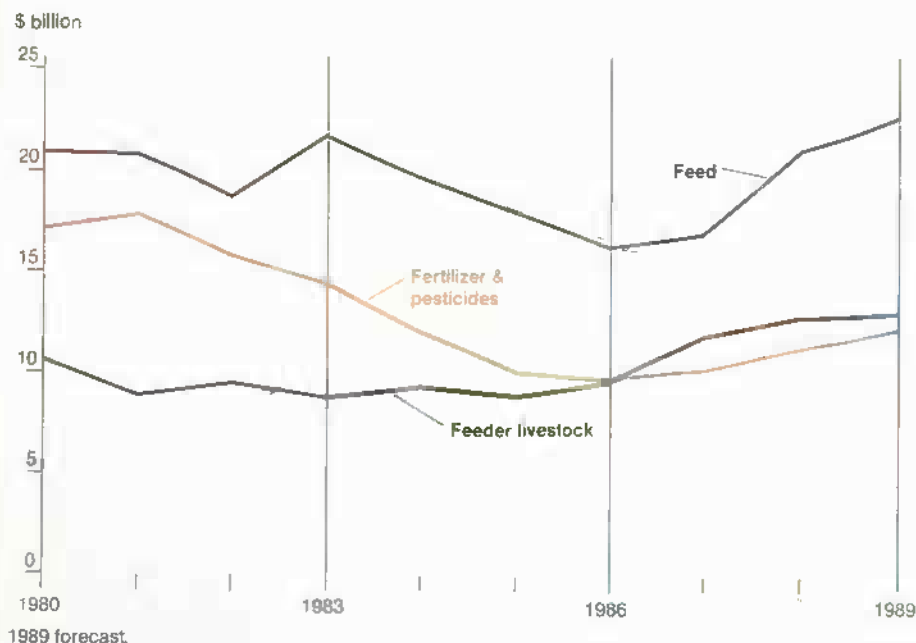
Every quarter, forecasts are published in both *Agricultural Income and Finance* and *Agricultural Outlook*. Final income estimates for 1988 have recently been completed, and it is now possible to assess the accuracy of the farm income forecasts for the last 7 years.

An accompanying table ("Average Dollar Differences...") presents the average absolute errors of the Outlook Conference forecast, and of the average forecasts for each of the 6 subsequent quarters, for 1982-88. The forecast error is the absolute value of the difference between the final estimate and the forecast.

It should be emphasized that the final estimate used in this comparison is not made until the summer following the year in question. It is a final estimate in that it is no longer subject to monthly or quarterly revisions.

However, the final estimates are still subject to change, albeit on a less frequent basis. For example, major revisions in the income data series may be made next year after the results of the 1987 Census of Agriculture are in.

Some Production Expenses Rising More Slowly This Year



Average Dollar Differences Between Forecasts and Final Estimates, 1982-88

	Outlook Conference	1st qtr.	2nd qtr.	3rd qtr.	4th qtr.	5th qtr.	6th qtr.
\$ billion							
Cash receipts	5.2	5.1	4.8	3.1	3.2	1.9	0.8
Crops	3.8	3.3	3.5	2.6	2.7	1.3	0.4
Livestock	3.0	2.6	1.7	0.9	1.0	2.6	0.6
Direct Gov't. payments	3.2	1.6	0.7	0.7	0.3	0.7	0.2
Gross cash income	6.1	6.5	5.6	4.1	3.9	2.5	1.3
Nonmoney income	1.3	1.1	1.0	0.9	0.6	0.6	0.5
Inventory adjustment	3.4	2.9	2.7	2.3	1.8	1.9	1.2
Total gross income	7.2	7.1	6.4	5.7	5.4	3.9	2.3
Cash expenses	7.6	5.7	4.1	3.2	2.7	2.7	2.1
Total expenses	8.4	6.4	4.5	3.4	3.0	2.8	2.2
Net cash income	9.2	7.8	5.5	4.0	4.0	2.7	1.7
Net farm income	6.6	6.6	5.3	5.5	5.1	3.4	1.8

Gross cash income is the sum of cash receipts, direct Government payments, and farm-related cash income.

Nonmoney income is the imputed rental value of operator dwellings and the value of home consumption of commodities produced on the farm.

Inventory adjustment excludes receipts from commodities produced in earlier years and includes the value of commodities produced this year but not sold.

Total gross income is the sum of gross cash income, nonmoney income, and the inventory adjustment.

Total expenses include cash expenses, depreciation, and expenses related to the operator's dwellings.

Net cash income is gross cash income less cash expenses.

Net farm income is gross farm income less total expenses.

Proportional Differences Between Forecasts and Final Estimates, 1982-88

	Outlook Conference	1st qtr.	2nd qtr.	3rd qtr.	4th qtr.	5th qtr.	6th qtr.
Percent							
Cash receipts	3.6	3.5	3.4	2.1	2.3	1.4	0.6
Crops	5.4	4.9	5.1	3.8	3.9	1.9	0.6
Livestock	4.0	3.4	2.3	1.2	1.4	3.5	0.8
Direct Gov't. payments	34.6	21.6	9.8	7.7	4.1	6.3	1.7
Gross cash income	3.8	4.0	3.5	2.6	2.5	1.6	0.8
Nonmoney income	10.9	9.6	8.4	7.3	5.4	5.1	4.2
Inventory adjustment	119.7	81.1	67.5	65.7	69.8	92.7	74.1
Total gross income	4.4	4.2	3.8	3.4	3.3	2.3	1.4
Cash expenses	7.0	5.2	3.8	3.0	2.6	2.5	1.9
Total expenses	6.3	4.8	3.4	2.6	2.3	2.2	1.7
Net cash income	20.2	17.0	12.2	8.8	9.1	6.2	3.8
Net farm income	19.8	20.3	19.6	20.8	18.1	11.8	5.6

Differences Between Outlook Conference Forecast and Final Estimates

Item	Number of years	
	Smallest	Largest
\$ billion		
Cash receipts	0.2	16.0
Crops	1.0	8.8
Livestock	0.6	7.6
Direct Gov't.	0.1	7.8
Farm related income	0.5	4.2
Gross cash income	1.0	17.0
Nonmoney income	0.5	2.6
Realized gross inc.	0.4	18.7
Value of inv. change	0.9	10.2
Total gross income	1.4	13.5
Cash expenses	0.5	12.5
Total expenses	0.6	13.5
Net cash income-nominal	2.1	13.7
Net farm income-nominal	0.1	13.8
Off-farm income	0.0	4.1

Forecast Errors Shrink

The forecast errors shrink as the year progresses. The average forecast error for direct Government payments declines by half in the first quarter of the forecast year, and by nearly 80 percent in the second quarter. Likewise, the average forecast error for cash expenses is down by 45 percent two quarters after the Outlook Conference.

A second table ("Proportional Differences...") presents the forecast errors as a percentage of the final estimates. This table gives a better idea of the relative magnitudes of the forecast errors. Again, the pattern of decreasing forecast errors is evident for most items. By the second quarter of the forecast year, the average forecast error is less than 4 percent for gross cash income and both expense forecasts.

The relatively large forecast errors for net cash and net farm income can be attributed to the fact that neither is calculated directly; both are the result of other forecasts. They are constructed by subtracting the expense forecast from the revenue forecast; any errors in the component forecasts are compounded in the net income estimates.

Also, because both net income numbers are less than half the magnitude of either expense or gross income, a given absolute error will be proportionately much larger for the net income forecasts. Even forecasting both gross income and expenses with minimal error can result in very large forecast errors for net income.

Forecasts Show Some Bias

Both the range of forecast errors and the number of Outlook Conference forecasts that were above and below the final estimate appear in a third table ("Differences Between..."). The forecasts for crop receipts and livestock receipts were split evenly, with about half the forecasts under and half over the final estimate.

However, because forecasts of Government payments and farm-related income were consistently below the final estimate, gross cash income was underestimated in 5 of the 7 years. Cash expenses were overestimated in 5 years. But, the 2 years in which cash expenses were underestimated were 2 of the years in which

gross cash income was underestimated. So, forecasts for net cash income were below the final estimate in all 7 years.

The net farm income forecasts were also consistently below the final estimate. Four of the seven forecasts of total gross income were below the final and three were above. But, because the forecasts of total production expenses and inventory adjustment were above the final estimate in 6 of the 7 years, the net farm income forecasts were under the final estimate in all but 1 of the 7 years.
[Andy Bernat (202) 786-1807]

Upcoming Releases from the Agricultural Statistics Board

The following list gives the release dates of the major Agricultural Statistics Board reports that will be issued by the time the November *Agricultural Outlook* comes off press.

October

- 2 Egg Products
 - 3 Poultry Slaughter
 - 5 Dairy Products
 - 6 Celery
 - 11 Vegetables
 - 12 Crop Production
 - 13 Turkey Hatchery
 - 16 Milk Production
 - 20 Catfish
 - Cattle on Feed
 - Livestock Slaughter
 - 23 Cold Storage
 - 25 Eggs, Chickens and Turkeys
 - 30 Peanut Stocks and Processing
 - 31 Rice Stocks
- Agricultural Prices



Resources

Some Tillage Methods Still Leave Insufficient Residue

Less than 25 percent of corn, wheat, and soybean acreage surveyed by ERS is tilled to leave at least 30 percent of the soil surface covered with residue after planting.

This statistic, drawn from ERS's 1988 Cropping Practices Survey, may have implications for the amount of land that would currently meet conservation compliance provisions of the 1985 Food Security Act (FSA). Thirty-percent residue is commonly accepted by conservationists as indicating a conservation tillage system, and in most cases should satisfy the compliance called for in the act.

Specifically, the legislation requires that crop acreage designated as highly erodible have a conservation plan approved by 1990 and fully implemented by 1995; failure to meet this requirement may result in loss of program payments. Although a farmer can reduce erosion by several methods—changing crop rotation, installing permanent retaining structures, or switching tillage systems—the last is often the cheapest alternative.

Depending on the crop, 15 to 30 percent of the 1988 corn, wheat, and soybean acreage was under conventional tillage with a moldboard plow. The plow leaves an average of only 2 percent of the previous crop residue, since it turns under the first few inches of topsoil.

At the other extreme, a no-till system was used on 7 percent of the corn acreage and about 1 percent of the wheat acreage. No-till left an average of 60 to 70 percent of the soil surface covered with residue.

Most of the acreage surveyed was cropped with conventional tillage without the moldboard plow. This system leaves less than 30 percent residue, although the implements used do not invert the soil. Conventional tillage systems without a moldboard plow leave less than half as much residue after planting as mulch-till, a conservation tillage system.

Tillage and Residue Vary Widely on Corn Acreage

For corn, tillage practices varied widely among the 10 major producing States, reflecting diverse production techniques and environments. A moldboard plow was used on 20 percent of 1988 corn acres. Its use was highest (57 percent) in Wisconsin, where corn/alfalfa rotations support dairy farming.

In Nebraska, the moldboard plow was used on only 5 percent of the corn acres. Nebraska does not have a preponderance of wet/heavy soils which require fall plowing. However, it does have more serious wind erosion problems than many other States.

Among the surveyed States, no-till systems were used on only 7 percent of the corn acres. Ohio had the highest percentage, 13. Ohio has traditionally had the highest amount of no-till acreage because of the emphasis placed on conservation tillage by its agricultural agencies.

The amount of no-till residue remaining in Michigan and Minnesota depended on the previous crop. In Michigan, where 55 percent of the corn was produced after corn in 1987, and 15 percent of the corn followed soybeans, no-till corn had 72 percent average residue remaining after planting.

In Minnesota, where 31 percent of corn was grown after corn and 46 percent after soybeans, the no-till residue was only 42 percent, since soybeans leave a more sparse and fragile residue than corn. The average no-till residue level

was higher in Nebraska, because of the extensive continuous corn production.

Heavy Moldboard Plow Use in Oregon and Oklahoma Winter Wheat

Oregon and Oklahoma report the heaviest reliance on moldboard plows in winter wheat production. According to USDA's Extension Service personnel, some producers in Oregon may believe that the risk of disease intensifies when large amounts of wheat residue are left on the soil surface. Agricultural agencies in Oregon are researching this perception.

Idaho and Minnesota report greater-than-average use of the plow in producing spring wheat. Idaho uses no-till on 10 percent of its winter wheat acreage, and reports no use on spring wheat acreage. Idaho agricultural agencies have emphasized adoption of no-till in winter wheat areas, which have higher erosion potential.

Soil Residue Calculations and Tillage System Definitions

Tillage designations for 1988 were derived from estimates of residue remaining after planting and from information on tillage implements used. The estimate of the percent of soil surface covered with residue was imputed from the crop grown on the land in 1987 and the residue incorporation rates of tillage implements used in 1988. Previous-year crop and implement use data were from ERS's 1988 Cropping Practices Survey.

Tillage systems are defined as follows:

Conventional tillage systems—leave less than 30 percent of the soil surface covered with residue after planting. Two subcategories:

1. Conventional tillage with moldboard plow—includes the use of a moldboard

plow and soil inversion.

2. Conventional tillage without moldboard plow—leaves less than 30 percent residue but does not use a moldboard plow. Usually involves several trips over the field with disks, cultivators, or chisel plows.

Conservation tillage systems—leave 30 percent or more of the soil surface covered with residue after planting. Two subcategories:

1. Mulch-tillage—leaves 30 percent or more residue after planting but does involve some tilling, usually a single trip over the field with a disk, cultivator, or chisel plow.

2. No-till—no residue-incorporating tillage operations performed prior to planting. Ridge-till was included in this category.

Tillage Practices Used in Corn Production, 1988

Category	Ill.	Ind.	Iowa	Mich.	Minn.	Mo.	Nebr. 1/	Nebr. 2/	Ohio	S. Dak.	Wis.	Total
Planted acres (1,000)	9,900	5,200	11,300	2,100	5,700	2,200	3,300	4,600	3,300	3,150	3,450	53,200
Percent of acres 3/												
Tillage:												
Conv/w mbd plow	10	25	14	35	31	17	id	5	38	25	57	20
Conv/wo mbd plow	72	57	66	42	44	68	61	63	40	54	35	60
Mulch-till	11	8	15	11	20	10	24	21	9	18	7	14
No-till	7	10	5	11	5	5	10	12	13	id	id	7
Percent of soil surface covered												
Residue:												
Conv/w mbd plow	2	2	2	2	3	2	id	2	2	2	2	2
Conv/wo mbd plow	15	15	17	17	14	14	18	20	15	16	20	16
Mulch-till	37	35	38	41	38	41	41	39	37	37	35	38
No-till	57	64	57	72	42	45	65	69	68	id	id	60
Average	19	18	20	21	17	17	27	29	19	17	11	19

id = insufficient data.

1/ Nonirrigated. 2/ Irrigated. 3/ May not add to 100 because of rounding.

Tillage Practices Used in Winter Wheat Production, 1988

Category	Ariz.	Calif.	Colo.	Idaho	Ill.	Ind.	Kan.	Mo.	Mont.	Nebr.	Ohio	Okla.	Ore.	Tex.	Wash.	Total
Harvested acres (1000)	1,050	440	2,350	790	1,220	700	9,400	1,550	2,100	2,000	920	4,800	660	3,100	1,750	27,390
Percent of acres*																
Tillage:																
Conv/w mbd plow	nr	6	6	16	3	13	17	id	id	19	3	29	40	nr	5	15
Conv/wo mbd plow	79	86	71	66	93	78	62	68	74	68	72	64	53	77	81	67
Mulch-till	16	8	24	7	5	9	20	24	17	12	18	7	6	22	12	16
No-till	4	nr	nr	10	nr	nr	id	5	7	nr	7	nr	id	id	2	1
Percent of soil surface covered																
Residue:																
Conv/w mbd plow	nr	1	2	2	2	3	2	id	id	2	1	2	2	nr	2	2
Conv/wo mbd plow	13	7	17	11	17	15	14	18	15	15	16	11	12	14	15	14
Mulch-till	43	43	41	45	41	45	36	41	36	36	39	38	35	39	40	38
No-till	68	nr	nr	38	nr	nr	id	68	80	nr	55	nr	id	id	35	61
Average	20	9	22	15	17	17	17	25	23	15	23	11	10	20	18	17

id = insufficient data. nr = none reported.

*May not add to 100 because of rounding.

Soybean Tillage Shows North-South Differences

Soybean tillage systems differ between northern and southern producers. In the northern area, conventional tillage with a moldboard plow was used on 28 percent of the acres, compared with only 3 percent of the southern area. In contrast, conventional tillage without the moldboard plow was used on 85 percent of southern acreage, compared with 55 percent of northern acreage.

Mulch tillage was more common in the northern soybean area than in the southern (14 versus 5 percent), while no-till was more common in the southern area (7 versus 3 percent).

Crop rotation practices may explain these differences. In the southern soybean area, 50-90 percent of the previous crop was either soybeans or was fallow (leaving fragile and limited residues). In the northern area, over 60 percent of the previous crop residue was corn, which leaves a sturdier and heavier residue.

Conservation Practices Must Be in Place by 1995

The adoption of conservation tillage may become increasingly widespread, considering the conservation compliance provisions of the 1985 FSA, expectations about the environmental aspects of a new farm bill, and the continuous search to reduce costs of production. Furthermore, conservation tillage practices applied to land that is not highly erosive, or adopted by nonparticipants in government programs, could further protect soils.

Conservation tillage practices also improve surface water quality; Federal and State legislation, such as the Water Quality Act of 1987, encourages their adoption. Thus, both agricultural and environmental policy may influence the adoption of conservation tillage.

Expectations are that the 1985 FSA requirements will produce a significant increase in mulch-till and no-till farming by 1995. The adoption of conservation tillage systems will need to proceed more rapidly for certain regions and crops, such as soybeans in the South, if the 30-percent residue cover goal is to be reached. [Len Bull and Stan Daberkow (202) 786-1464]



Agricultural Policy

Issues for the 1990 Farm Bill

The Administration, farmers, Congress, and many agricultural trade groups appear to approve of the stronger market orientation of the Food Security Act of 1985. Therefore, it is likely that the 1990 farm bill will be even more market oriented.

However, a number of issues will be debated before a new omnibus act is approved, including farm program costs, price and income supports, food safety, the environment, and rural development. These issues will need to be integrated with traditional objectives: protecting farm income, correcting supply-demand imbalances, managing exports, and ensuring an adequate and stable food supply.

The Budget and GATT Dominate

The Gramm-Rudman-Hollings balanced budget law requires that the Federal deficit be reduced to \$64 billion in fiscal 1991 and to zero by 1993. This schedule will necessitate some tough choices for policymakers.

Spending on farm programs likely will decline, and policies and programs will be scrutinized as to their direct effect on the budget and what they spell in potential budget exposure. The debate will focus on how spending will be allocated across program areas.

Agricultural policy negotiations and debates are occurring on two fronts, domestic and international. In the Uruguay Round of the General Agreement on Tariffs and Trade (GATT), the U.S. and other GATT participants are negotiating to progressively reduce agricultural supports that distort trade. At the same time, some proposed farm policies for the 1990 farm bill may be trade distorting. The issue of consistency between the 1990 farm bill and any agreements made at the GATT will continue to be debated.

Supports: A Gordian Knot?

Price and income supports involve a number of issues that are extremely complex, highly integrated, and that may even conflict. These issues include production controls, planting flexibility, stocks policy, the link between production levels and program benefits, the levels for target prices and loan rates, and trade.

A component of the current policy is to idle land under acreage reduction programs (ARP's) in order to correct supply-demand imbalances. ARP's enable the Government to strongly influence the production of specific commodities. Restricting production increases market prices above what they otherwise might be. And the nonrecourse loan program (i.e., minimum prices) cuts downside price risk, potentially leading to more intensive production. This situation creates some unwanted effects:

- program participants may intensify production on permitted acres, especially if the market price is below the loan rate;
- nonparticipants may increase production when the market price is pulled up by the loan rate;
- the cost of U.S. farm exports rises, making farm commodities less competitive; and
- competitors can expand their production and capture markets.

Government commodity programs, as currently structured, make it more difficult for farmers to plant nonprogram

crops (including soybeans) on base acreages, even when market prices favor non-program crops.

Exceptions allowing greater planting flexibility have been permitted, including provisions in the 1988 and 1989 disaster assistance acts, as well as the changes to the 1990 wheat program announced last month (see the Field Crop Overview).

The levels set for target prices and loan rates may be realigned in the new farm bill. The levels directly influence farmers' assessment of the relative attractiveness of one crop over another, and the decision on whether to participate in commodity programs. Farmers' participation rates determine the degree of Government budget exposure, the programs' relative success in controlling production, and the likely accumulation of Government stocks.

Another issue that will receive attention is targeting of program benefits. Are program benefits received by those who need the support? Some critics of current programs worry that smaller family farm operators do not receive adequate benefits, while big farms may enjoy unnecessary support.

Food Reserves: Who Will Pay?

Who bears the cost of maintaining food reserves is a concern. The Federal Government, through the nonrecourse loan programs, has accumulated large commodity stocks in the past. While large Government stocks support market prices, they also increase the cost of maintaining the U.S. position in world markets when supplies are plentiful.

And reserves augment world supplies when production is cut short, thus dampening price increases. There is a cost in both situations: loss of markets when world supplies are plentiful, or loss of farm income when world supplies would otherwise push up prices.

At the same time, these reserves enable the Government to operate food distribution/donation/subsidy programs such as cheese giveaways, national school lunch and breakfast programs, and the Temporary Emergency Food Assistance Program.

The Export Enhancement Program and the Targeted Export Assistance Program are supported by Government stock holdings, as commodities are used to subsidize exports or develop markets. The P.L. 480 program enables the Government to provide food aid to needy countries by drawing on Commodity Credit Corporation holdings.

With droughts in the 1988/89 and 1989/90 seasons, and through the use of commodity certificates, CCC holdings have declined dramatically. As of September 1, the CCC held 168 million bushels of wheat and 363 million bushels of corn. However, at the same time that market supplies were tightening, the release level for corn in the farmer-owned reserve was reached only briefly, and minimum cash resale levels for corn and wheat in CCC inventories were never reached.

At issue is how much responsibility for maintaining reserves should go to the Government versus how much to the private sector. Compounding the issue is another question: how extensively should reserve policy be integrated with other programs?

Food Safety and Environment Are Emotional Issues

The controversy over use of Alar on apples, questions about bovine somatotropin, and the EC ban on meat imports treated with hormones have heightened public awareness about food safety. New technologies and reactions by consumers are the major driving forces behind the rapidly changing food safety arena.

Genetic research and bioengineering advances have led to new ways of producing traditional products, giving rise to questions: Is bST-produced milk still milk? Is a tomato genetically altered to have a longer shelf life still a tomato?

Similarly, scientific advances now allow researchers to measure chemical residues and bacteria that went undetected 5 or 10 years ago. Now that they can be accurately measured in minute amounts, what are acceptable levels of chemical residues and bacteria in food? Are existing standards outmoded?

As a result, consumers, increasingly confronted with new food-related information, are increasingly concerned with the types and amounts of food chemicals.

Congress is also concerned. Sen. Edward Kennedy (D-MA), Rep. Henry Waxman (D-CA), and others have introduced legislation that would regulate pesticide residues in food. Legislation is in the works that would establish inspection of seafood and tighten processing standards for poultry. The 1990 farm bill may be an avenue for legislative action on food safety.

Are farmers stewards of the land or are their practices degrading the environment? The Conservation Reserve Program (CRP) currently has over 30 million acres of erodible land enrolled through the eighth signup, and has successfully reduced soil loss. However, expansion to 40-45 million acres, as directed by the Food Security Act of 1985, will be costly and will require idling land at a time of tightening supplies. Under the ninth signup, which ended August 4, USDA offered to place an additional 4.2 million acres into the Reserve.

The House has proposed a moratorium on future signups as a means of saving money. The budget, the environment, and food cost trade-offs will face decisionmakers as work on the new farm bill progresses.

Concerns have been growing about agricultural chemicals in groundwater. Fertilizer and pesticide runoff have been found in some water supplies: groundwater testing has revealed at least 17 pesticides and nitrates from fertilizer in the supplies for 23 States. And 35 States have enacted some form of groundwater protection.

There is a movement to reduce or even eliminate chemical use in agriculture. The Safe Drinking Water Act of 1985 calls on States to develop groundwater protection programs with Federal assistance. Several States also are defining what an "organically grown" commodity is.

There is a call for sustainable agriculture, or low input sustainable agriculture. The National Academy of Sciences has come

out with a study of alternative agriculture that is fueling the debate. One of the study's conclusions is that "[F]ederal programs often tolerate and sometimes encourage unrealistically high yield goals, inefficient fertilizer and pesticide use, and unsustainable use of land and water."

A provision of S.970, a bill introduced by Sen. Wyche Fowler, Jr. (D-GA), would establish a low input sustainable production system program. The question is how producers can remain economically viable without harming the environment.

Rural Development Is a Hot Issue

The fact that the rural sector and the farm sector are not synonymous became apparent in the 1980's. Federal programs that benefit farmers do not necessarily aid the rural sector as well. There are approximately 3,100 counties in the U.S.; of these, 15 to 20 percent are defined as agriculturally dependent; that is, having at least 20 percent of income derived from farming.

The Senate has already passed a comprehensive rural development bill which would provide broad-based funding to the rural sector. The House is considering the issue. Development policies that would promote growth in rural America, both in farming and outside it, likely will be part of the 1990 farm bill debate.

Crop insurance versus disaster assistance will be an issue. Disaster relief undermines the need for crop insurance, but for the past 2 years, Congress has authorized disaster relief (see the special article in this issue).

Credit and debt restructuring also remain concerns, even though the Agricultural Credit Act of 1987 substantially revamped the farm credit delivery system. About 40 percent of the farm loans held by USDA's Farmers Home Administration are delinquent; the agency is continuing to work with its stressed borrowers to minimize foreclosures. [Harry Baumes (202) 786-1689]





Special Articles

Liberalizing World Trade In Coarse Grains

This is the third in a series summarizing research on what could happen as negotiations under the GATT (General Agreement on Tariffs and Trade) move toward free trade in agriculture. Negotiators at the April review of the Uruguay Round agreed to "substantial progressive reductions in agricultural support and protection over an agreed period of time."

While there are adjustment costs involved in moving away from protectionism, both theory and research results suggest that the benefits of free trade outweigh the costs. But because there never has been free trade in agriculture, the findings in these articles are, of necessity, speculative. The results here represent a consensus of research conducted by the Economic Research Service, universities, and international organizations. A longer, in-depth research report lies behind each article, and will be available from the authors.—Ed.

Research suggests that phasing down worldwide government support and protection of agriculture would push up the volume of world coarse grain trade and increase coarse grain prices. World coarse grain production and consumption would rise slightly. Coarse grains include corn, barley, sorghum, oats, and rye.

U.S. coarse grain output could expand, depending on the trade-off between set-aside acreage returning to production, less intensive use of other inputs, and the relative attractive-

ness of other crops. U.S. exports likely would increase in response to rising world demand. In turn, market receipts for U.S. producers would go up as world prices rose, even though total receipts (including Government support) would decline, unless decoupled income-support payments were made.

Coarse Grain Stocks Ballooned in Early 1980's

Agriculture and trade policies of the major coarse grain trading countries, plus global recession and the international debt crisis, contributed to a 65-percent increase in world coarse grain stocks during 1980-85. Production rose by 15 percent to 843 million metric tons, but consumption expanded by only 4 percent to 779 million tons. World prices slipped about 30 percent. Trade in coarse grains dropped 23 percent to 83 million tons.

GATT participants, including many major players in the world coarse grain market, have recognized the need to reform their agricultural and trade policies. The April agreement reflects this consensus, and expands GATT's role in reforming domestic agricultural programs (see the May *Agricultural Outlook*). A recent study estimated that world savings for consumers and taxpayers from agricultural trade reform could be substantial.

Policies Distort Trade

The EC and the U.S. both support domestic coarse grain producer prices to varying degrees, in part to maintain farm incomes. Some exporters, such as Canada, reduce production costs by subsidizing inputs. These actions increase the world's supply of coarse grains. If domestic consumer prices are not kept lower than the supported producer prices by governments, consumption falls and exportable supplies pile up, leading to lower world prices.

Producer Subsidy Equivalents (PSE's) for Coarse Grains, Average 1982-86^a

Country	Corn	Sorghum	Barley	Oats	Rye
Percent					
Exporters					
United States	27.1	31.4	28.8	7.6	--
EC-10	24.8	--	14.2	--	--
Argentina	.3	-27.4	--	--	--
Canada	10.0	--	32.1	9.7	27.2
Australia	--	--	2.9	--	--
South Africa	50.3	--	--	--	--
Importers					
Japan	--	--	96.9	--	--
South Korea	59.4	--	65.6	--	--
Taiwan	70.1	74.3	--	--	--
Nigeria	2.8	--	--	--	--
Brazil	4.0	--	--	--	--
Mexico	53.1	36.5	--	--	--

^aThe ratio of total government support to total farm revenue (including government support), as a percentage. Government support includes the benefits of import protection, direct payments, extension, research, plus input and marketing subsidies. A negative PSE means that the net effect of government policies is to tax producers.

Source: ERS Staff Report AGES880127, April 1988.

In many nations, trade policies complement domestic agricultural programs by helping to boost farm income or cut surplus stocks. When governments keep producer prices above world prices, exporters often rely on subsidies to move grain into foreign markets. At the same time, many governments impose import barriers to protect domestic growers, further lowering world prices.

Protectionist Tools Vary

The U.S., the largest producer and exporter in the world coarse grain market, has historically maintained substantial coarse grain stocks as a consequence of its price-support programs. U.S. support policies have generally put a floor under world coarse grain prices. But, since the implementation of the 1985 Food Security Act, most loan rates have been below market-clearing levels.

The EC engages in intervention purchasing at above-market prices, which increases production and reduces domestic consumption. Consequently, the EC uses export subsidies and has become a substantial exporter of barley, while importing less corn.

To deal with overproduction, exporting countries often resort to subsidizing domestic and foreign consumers. In the U.S., the Export Enhancement Program for barley and sorghum acts to subsidize the foreign consumer. These exporter policies tend to lower world coarse grain prices.

To protect domestic producers, importing countries often impose tariffs on imported coarse grains. These tariffs, together with the exporter policies, lower world prices.

Producer subsidy equivalents (PSE's) are a means of comparing coarse grain subsidies and trade barriers across nations. PSE's are defined as the ratio of total government support to total farm revenue (including government support). Total government support includes the benefits of import protection, direct payments, extension and research, plus input and marketing subsidies. The larger a nation's PSE, the more its producers could lose if the world moved to free trade.

According to the PSE's for 1982-86, producers in Japan, South Africa, Canada, the EC, and the U.S. stand to experience the greatest declines in support if trade reform occurs. But some developing countries with high PSE's likely would receive special treatment under GATT terms, in order to continue developing their agricultural sectors.

Efficient producers may be able to recoup some of the lost support as world prices rise and trade expands.

Higher Livestock Prices Would Pull Up Corn Demand

Several recent studies suggest that livestock prices would rise relative to coarse grain prices because of trade liberalization. If so, coarse grain demand in several countries (such as the U.S., Canada, Australia, and the EC) would be pulled up.

Subsidies for promoting wheat exports by the U.S. and EC have dropped world wheat prices relative to coarse grain prices. The removal of export subsidies in liberalizing countries could reduce coarse grain prices relative to wheat prices, eroding the use of wheat as livestock feed. The removal of variable levies in the EC would lower the incentive to use substitutes for coarse grains. Bottom line: multi-national trade liberalization would boost the worldwide demand for coarse grains.

Other cross-commodity relationships that would affect world coarse grain markets reflect the relative scarcity of cropland. In the U.S. and Argentina, the major alternatives to producing coarse grains are soybeans, wheat, and livestock. In Australia and Canada, wheat and livestock are the major alternatives.

Prices Would Rise

Coarse grain prices likely would increase in the long run with the removal of program incentives to overproduce, increased livestock demand for coarse grains, and the elimination of export subsidies. Several recent studies have found that coarse grain prices would rise between 1 and 11 percent in the long run under free trade. This rise should not be confused with per-bushel revenue received by farmers, which likely would decline in most developed countries as subsidies for coarse grains were eliminated.

Coarse grain prices' relationship to other commodity prices would change as well. Recent studies suggest that the prices of coarse grains likely would decrease relative to wheat and livestock, but rise relative to soybeans.

Effects on Price Stability Unclear

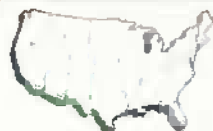
Some studies suggest that the net effect of trade liberalization would be more stable coarse grain prices, while other studies suggest less stable prices. For individual countries, price stability will vary with the programs now in place.

On the one hand, world market prices for coarse grains could become more stable, because more market participants would share in adjusting to any supply or demand shocks. After liberalization, producer and consumer prices would converge with the world price as differences caused by subsidies were removed. Differing marketing and transportation margins would continue to introduce some variation, though.

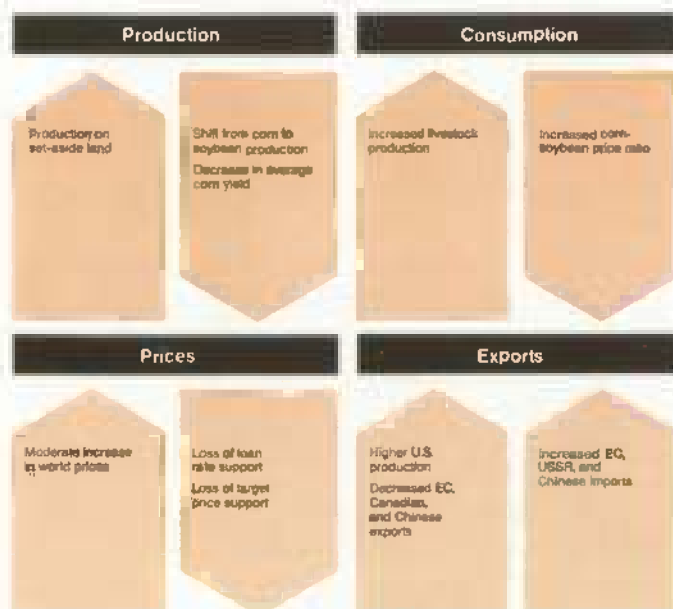
On the other hand, the domestic prices faced by consumers and producers in regions where prices are now stabilized by governments, such as the U.S., the EC, and Japan, would fluctuate more than now, as the world market opened up. Some researchers believe that these individual effects would cause world prices to become more unstable, since the U.S., a dominant participant in coarse grain trade, would face more variable prices in absence of a large stockpiling program.



World Trade Liberalization Would Increase Production, Consumption, Prices, and Trade



In the U.S., Trade Liberalization Would Mean More Production And Higher Prices



Who's Who in the World Coarse Grain Market

Nearly three-quarters of the world's coarse grain is grown in the U.S., the USSR, the EC, China, and Eastern Europe. The U.S. alone accounted for 30 percent of the world's production in 1985-87. Canada, Argentina, Australia, South Africa, Thailand, Brazil, India, Mexico, and Nigeria each averaged only 1 to 3 percent of total world production.

World coarse grain consumption is concentrated in the U.S., the USSR, China, the EC, and Eastern Europe. These five typically account for about 70 percent of the world's coarse grain consumption, and the U.S. share is about 22 percent.

India and Brazil each take 2-3 percent of total world consumption, and depend mainly on their own output. Saudi Arabia, Algeria, South Korea, Egypt, Taiwan, Japan, Mexico, and Venezuela each account for less than 3 percent of total consumption, but collectively are significant importers.

The U.S., EC, Argentina, Canada, China, Australia, Thailand, and South Africa account for more than 90 percent of the world's coarse grain exports. During 1985-87, the average world market share for the U.S. was 55 percent. Major trade flows have shifted from Western Europe to the Middle East and Asia in the last decade. Since 1985, the EC and China have shifted their status from net importers to net exporters.

Major coarse grain importers include Japan, the EC, the USSR, Saudi Arabia, South Korea, Taiwan, Eastern Europe, and Mexico. Together they account for nearly three-fourths of the world's coarse grain imports.

Historically, the U.S. is the world's largest coarse grain stockholder. It held an average of slightly more than 60 percent of the world's stocks in 1985-87. The U.S. and the EC are the only large producers whose domestic policies include grain storage to absorb excess production. Other major stockholders include China, the USSR, Eastern Europe, Canada, and Japan.

U.S. Would Be Major Source Of Production Change

Coarse grain production in the U.S. likely would increase with free trade, as much of the land idled under the Acreage Reduction and Paid Land Diversion programs returned to production. This would more than offset the acreage decrease due to farmers' abandoning coarse grain production because of lost program payments. (The analyses assume that GATT reform would not affect acreage in the Conservation Reserve Program.)

Total returns received by U.S. coarse grain farmers would fall relative to soybeans as government payments were lost, leading some producers to switch acreage to soybeans. On balance, though, most studies suggest that U.S. coarse grain production would still increase.

U.S. livestock producers likely would respond to the rising world demand for meat by expanding production. World meat consumption would go up as the EC and Japan removed trade barriers, which would lower their domestic consumer meat prices. More U.S. livestock production would boost the demand for U.S. coarse grains.

U.S. coarse grain exports would probably expand in response to greater world demand combined with smaller EC and Canadian exports.

World Output, Consumption Would Rise Slightly

Because of the movement away from protectionism, world coarse grain production would shift away from inefficient producers to more efficient ones, both within and across countries. The U.S., Argentina, and Thailand, all efficient producers, probably would increase output. However, production likely would decline in the EC, Japan, and Taiwan.

Long-run coarse grain consumption probably would gain because of the rise in world livestock prices. This increase assumes a growing population and rising incomes, leading to larger per capita consumption of meat, particularly in developing countries. The greatest potential for growth in world coarse grain consumption is in the Middle East and parts of Asia. African, Latin American, and East European countries have the potential to import more coarse grains, provided their debt problems become more manageable.

EC Probably Would Feel Greatest Impact

Because of lower domestic coarse grain prices, EC farmers probably would reduce production. But the size of the adjustment would depend on how relative prices changed and how much land went out of production. Livestock producers would use more coarse grains as feed, so the EC could again become a net coarse grain importer.

Trade reform would eliminate transportation subsidies for Canadian coarse grain producers, increasing export marketing costs. The likely result would be more domestic use for livestock feeding and less exports.

Among other coarse grain exporters, Australia probably would continue to export barley, but little expansion seems likely. Several studies indicate that Australia likely would produce more wool, wheat, and livestock, rather than boosting coarse grains substantially.

Thailand does not intervene much in coarse grain markets, and likely would expand production modestly in response to the slight increase in world coarse grain prices. However, its expanding poultry sector would probably use most of the additional grain.

Argentina could respond to trade reform by expanding coarse grain production and exports. The extent of the

response depends on whether the country participates in policy reform or not, since its output increase would be greater if export taxes were eliminated.

Argentina has extensive natural resources and is a low-cost producer of corn and sorghum. But coarse grains must compete with livestock and soybeans for these resources. Moreover, an inadequate transportation system and an unstable economy could limit production growth.

China, the USSR, and Eastern Europe likely will not participate in this round of GATT trade reform. Should China's livestock production expand as planned, domestic demand for coarse grain would increase. China could continue to export coarse grain from its northern provinces to the USSR and Japan, but also increase imports into south China, becoming a net importer.

The USSR and Eastern Europe, both large importers, probably will continue expanding their livestock production. Because world wheat prices would probably rise relative to corn after trade liberalization, the USSR and Eastern Europe would import more coarse grains.

Japan imports nearly all its coarse grains. Trade reform would lead to increased meat imports and decreased domestic coarse grain production. Domestic beef, dairy, and pork production would fall, which would reduce coarse grain consumption by more than production. So Japan's imports would fall.

World Trade To Rise

Trade liberalization likely would mean that world coarse grain trade would go up faster than would otherwise be the case. For example, the EC probably would reduce production, but expanded livestock consumption of coarse grain would probably mean increased imports, largely from the U.S. The increase in trade due to the EC would be offset somewhat by lower Canadian exports and fewer Japanese imports.

These results reflect the likely effects of full multilateral trade reform in the industrial nations. If these nations go only part of the way, the direction of changes in trade, production, and prices would be the same, but the changes would be smaller. Because coarse grain consumption depends critically on livestock production decisions, the results outlined here, under full liberalization, also reflect likely changes in world livestock production. But a different pattern would emerge if, for example, coarse grains markets opened up but livestock markets remained protected.

Moreover, U.S. trade policy officials have stressed that eliminating domestic U.S. support and trade programs must be matched by similar actions in other countries. [Linwood Hoffman, Bengt Hyberg, and Stephanie Mercier (202) 786-1840]



Weighing Crop Insurance Alternatives

Problems with the current federal crop insurance program have caused policymakers to suggest several alternatives. The present program has been characterized by low farmer participation, high Government costs, and frequent use of ad hoc disaster assistance acts that undercut the need for crop insurance. (See the September *Agricultural Outlook*, page 2, for more on these problems.)

New options, which could be included in the 1990 farm bill, include the following:

- compulsory purchase of crop insurance for commodity program participants,
- free crop insurance for commodity program participants,
- replacement of crop insurance with a permanent disaster payment program, or
- replacement of deficiency payment programs with a target revenue program.

The option of improving the current voluntary, subsidized crop insurance program is undergoing further study and is not considered here.

The potential budget impacts of these four alternatives are critically important to policymakers. Total indemnity or disaster payments would depend on the extent of insurance coverage, the extent of the disaster, and whether program benefits were restricted to participants in Government commodity programs. Other possible costs are also significant. Some of the program options could have sizable effects on

commodity program participation and crop production, and hence on Commodity Credit Corporation outlays for price support loans and deficiency payments.

To examine the potential market and budget effects of the program options, a model was used to capture producer, consumer, and Government behavior. The simulations that were run for the 1989 crop year were based on a large number of possible yield outcomes for corn, wheat, soybeans, and cotton.

Prices, demand, production, planted and harvested acreage, ending stocks, and commodity program participation were calculated for each of the simulated national yield outcomes. In addition, the model was used to estimate Federal budget costs (loan and storage outlays, deficiency payments, disaster payments, and net indemnity payments).

How Program Options Vary

Four new program options, plus an option representing the current program, were simulated:

Compulsory crop insurance.—Under this option, commodity program participants would be required to purchase crop insurance at a 65-percent yield guarantee at the lowest of three possible price election levels. (Higher yield guarantees and price election levels could be chosen voluntarily.) The Government would subsidize 30 percent of the premium. There would be no ad hoc disaster assistance. All other features of the current program would remain intact.

Free crop insurance.—Commodity program participants would receive free insurance coverage at the lowest price election level for 65-percent yield coverage. There would be no ad hoc disaster assistance. All other features would be the same as under the current program.

Disaster assistance program.—This program would replace Federal crop insurance. Payments would be available to any producer who suffered crop losses in excess of 35 percent. Payment rates would be based on 65 percent of target prices for corn, wheat, and upland cotton producers, and on \$5.50 per bushel for soybean producers.

Target revenue program.—This program would replace both the crop insurance and deficiency payments programs, and would be available for corn, wheat, and upland cotton producers. The current loan program would remain in place, as would acreage reduction requirements. Program participants would be paid the difference, if positive, between the target revenue and the actual revenue they receive from marketing the crop or placing it under loan. Target revenues would be calculated by multiplying the target price by the program yield. There would be no ad hoc disaster assistance.

Ad hoc disaster assistance (this option represents the current program).—Under this option, loan rates, target prices, and acreage reduction program levels are set at 1989 levels. Ad hoc disaster assistance is assumed to be paid if U.S. yields

How Insurance Options Could Affect Average Government Costs for Four Crops*

Item	Ad hoc disaster assistance	Disaster assistance option	Crop insurance options		Target revenue option
			Compulsory	Free	
\$ million					
1989 crop year estimated					
Government outlays:					
Loan and storage	1,563.2	1,555.6	1,580.8	1,612.6	1,380.0
Deficiency payments	6,817.5	6,750.0	6,956.2	7,152.3	3,809.2
Ad hoc disaster payments	577.9	1,186.8	---	---	---
Indemnity payments	277.7	---	596.3	617.5	---
Producer premium	-194.4	---	-417.4	0	---
Administrative costs	197.9	207.7	223.7	231.5	---
Total	9,239.9	9,700.1	8,939.6	9,613.9	5,189.2
Percent					
Share of current program	100.0	105.0	96.8	104.0	56.2
Share of disaster assistance program option	95.3	100.0	92.2	99.1	53.5

--- = not applicable.

*Wheat, corn, soybeans, and upland cotton.

Source: ERS/USDA, Staff Report No. AGES84-29, September 1989.

are simulated to be less than 90 percent of expected trend. Individual disaster payments are made on crop losses in excess of 35 percent of expected yield, on a payment rate of 65 percent of target prices for wheat, upland cotton, and corn, and \$5.50 per bushel for soybeans.

Target Revenue Alternative Would Have Greatest Market Effects

The simulation results indicate that, on average, any of the four new program options would have fairly modest effects on prices, per acre revenues, commodity program participation, and harvested acreage.

The largest market effects likely would occur under the target revenue program. Under the current crop programs, deficiency payments are calculated by multiplying the producer's program yield by the difference, if positive, between the target price and the greater of the national average price or the national loan rate. Program yields used to calculate deficiency payments have been frozen at their 1985 levels, although actual yields have been trending upward.

While the current program protects producers against low prices, it offers little protection against disaster-reduced yields (the case most of the time). When drought occurs, increasing prices reduce the deficiency payment.

Under a target revenue program, producers would fare better than under the current program when actual yields fell below program yields, but worse when actual yields were above program yields. This would stabilize producer revenues around the target level.

Per acre, revenues for target revenue program participants were estimated to be substantially less than under the current program, mainly because of the discrepancy between fixed program yields and actual yields.

Participation Would Rise Most With Free Insurance

The compulsory crop insurance and disaster assistance options produced participation rates and market effects similar to those of the current program.

Participation rates would rise the most under the free insurance option. This would occur mainly because participants in the free crop insurance program would have higher revenues, on average, than those outside the program. Harvested acreage would increase slightly under this option and market prices would fall slightly.

Farmers' participation in commodity programs likely would decrease slightly under the compulsory crop insurance program, primarily reflecting the cost of purchasing crop insurance. However, continued high participation in commodity programs under both the compulsory and the free crop insurance options probably would obviate the need for ad hoc disaster assistance.

Budget Effects: Disaster Assistance Program Most Costly

Government outlays for the four commodities would be highest under the permanent disaster assistance program option. Based on the simulations, the estimated average program costs for 1989 would have been \$9.7 billion, almost \$500 million more than the current program.

Government outlays under a free crop insurance program would also be more than under the current program. But payments under a disaster assistance option would exceed indemnity payments under a free crop insurance option. Increased program participation under free crop insurance would raise deficiency payments and loan outlays.

On average, compulsory crop insurance would be less costly to operate than the current program. While premium subsidy

costs and administrative costs would be greater, ad hoc disaster payments likely would be eliminated because of the high crop insurance participation. Further savings could be realized if commodity program participation decreased under the program.

Costs under a target revenue program likely would be little more than half the cost of the current program. Most of the reduction would be due to the decline in program participation.

But lower commodity program participation could boost nonparticipants' pressure for ad hoc disaster assistance. Basing target revenues on average yields rather than on lower program yields probably would increase the costs of a target revenue program to over 125 percent of current program costs.

The costs presented in the accompanying table reflect the average simulated Government outlays for 1989, and strongly depend on the assumed yield outcomes. The frequency of payments can differ considerably among the options. An ad hoc disaster program would require disaster payments in about 20 percent of the simulations, for instance, while a free crop insurance program would pay indemnities annually under most of the simulated yield outcomes.

Any New Program Must Balance Costs and Coverage Provided

For those interested in minimizing Government costs, the target revenue program clearly would be preferable; it results in costs less than half those of any other option when program yields are used. But lower Government costs would come at the expense of lower program participation, greater risk exposure to farmers, and lower farm income for both participants and nonparticipants.

On the other hand, those interested in greater risk protection to farmers through high participation rates probably would favor the free crop insurance program—but Government costs likely would be somewhat larger than under the current program.

Catastrophic risk protection for farmers requires balancing acceptable Federal budget exposure with the level and stability of protection offered. The program options discussed here could be tailored to balance these factors. In the end, however, policymakers may decide that making adjustments in the current crop insurance program is more desirable than switching to any of the four new alternatives. [Joe Glauber and Joy Harwood (202) 786-1840]

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Statistical Indicators

Summary Data

Table 1.—Key Statistical Indicators of the Food & Fiber Sector

	1988		1989					1990	
	IV	Annual	I	II	III	F	IV F	I F	Annual F
Prices received by farmers (1977=100)									
Livestock & products	144	138	149	148	137	--	140	--	--
Crops	152	150	159	156	151	--	154	--	--
	135	126	138	140	134	--	133	--	--
Prices paid by farmers, (1977=100)									
Production items	162	157	163	165	--	--	168	--	--
Commodities & services, interest, taxes, & wages	173	170	175	178	--	--	180	--	--
Cash receipts (\$ bil.) 1/									
Livestock (\$ bil.)	152	151	153	170	170	--	153-161	--	--
Crops (\$ bil.)	80	79	83	81	79	--	78-82	--	--
	72	73	70	89	91	--	75-79	--	--
Market basket (1982-84=100)									
Retail cost	118	116	123	125	--	--	--	--	--
Farm value	100	100	107	108	--	--	--	--	--
Spread	128	124	131	133	--	--	--	--	--
Farm value/retail cost (%)	30	30	30	30	--	--	--	--	--
Retail prices (1982-84=100)									
Food	120	118	123	125	126	126	125	--	--
At home	119	117	122	124	124	124	123	--	--
Away from home	123	122	125	127	129	130	128	--	--
Agricultural exports (\$ bil.) 2/	10.3	35.3	10.9	9.8	9.0	9.5	40.0	--	--
Agricultural imports (\$ bil.) 2/	5.2	21.0	5.8	5.5	5.0	5.2	21.5	--	--
Commercial production									
Red meat (mil. lb.)	10,269	39,763	9,594	9,871	9,865	9,973	39,303	9,600	39,205
Poultry (mil. lb.)	5,180	20,587	5,070	5,538	5,723	5,590	21,921	5,510	23,425
Eggs (mil. doz.)	1,446	5,771	1,391	1,394	1,405	1,460	5,650	1,415	5,770
Milk (bil. lb.)	35.4	145.5	31.2	32.3	35.5	35.6	145.7	37.1	148.7
Consumption, per capita									
Red meat and poultry (lb.)	56.1	218.4	52.5	54.1	55.2	57.2	219.1	53.7	222.3
Corn beginning stocks (mil. bu.) 3/	4,259.1	4,881.7	7,071.6	5,203.9	3,419.0	--	4,259.1	--	--
Corn use (mil. bu.) 3/	2,109.4	7,698.7	1,868.5	1,787.0	--	--	--	--	--
Prices 4/									
Choice steers--Omaha (\$/cwt)	70.14	69.54	73.67	73.85	70.71	72.76	72.74	73.79	71.77
Barrows & gilts--7 mths. (\$/cwt)	38.66	43.39	40.78	41.84	45.46	37.41	41.43	37.43	40.46
Broilers--12-city (cts./lb.)	57.9	56.3	59.4	67.1	58.59	54.58	59.61	50.56	49.55
Eggs--NY Gr. A large (cts./doz.)	67.3	62.1	78.6	75.2	80.81	68.72	75.77	65.71	62.68
Milk--all at plant (\$/cwt)	13.26	12.20	13.07	12.27	13.00-	13.90-	13.05-	13.00-	11.50-
					13.20	14.70	13.30	14.00	12.50
Wheat--Kansas City HRW ordinary (\$/bu.)	4.12	3.56	4.34	4.44	--	--	--	--	--
Corn--Chicago (\$/bu.)	2.75	2.39	2.72	2.76	--	--	--	--	--
Soybeans--Chicago (\$/bu.)	7.91	7.33	7.63	7.39	--	--	--	--	--
Cotton--Avg. spot mkt. (cts./lb.)	52.3	57.8	55.3	60.9	67.1	--	--	--	--
	1981	1982	1983	1984	1985	1986	1987	1988	1989 F
Gross cash income (\$ bil.)	146.0	150.6	150.4	155.2	156.9	152.5	162.0	171.6	170-175
Gross cash expenses (\$ bil.)	113.2	112.8	113.5	116.6	110.2	100.7	104.3	111.7	116-120
Net cash income (\$ bil.)	32.8	37.8	36.9	38.6	46.7	51.8	57.7	59.9	52-57
Net farm income (\$ bil.)	26.9	25.5	12.7	32.2	32.4	38.0	47.1	45.7	48-53
Farm real estate values 5/									
Nominal (\$ per acre)	819	823	788	782	679	595	547	564	597
Real (1977 \$)	551	513	472	448	376	322	290	288	291

1/ Quarterly data seasonally adjusted at annual rates. 2/ Annual data based on Oct.-Sept. fiscal years ending with year indicated.
 3/ Dec.-Feb. first quarter; Mar.-May second quarter; June-Aug. third quarter; Sept.-Nov. fourth quarter; Sept.-Aug. annual. Use includes exports & domestic disappearance. 4/ Simple averages. 5/ 1981 & 1986-89 values as of February 1. 1982-85 values as of April 1.
 F = forecast. -- = not available.

U.S. and Foreign Economic Data

Table 2.—U.S. Gross National Product & Related Data

	Annual			1988			1989	
	1986	1987	1988	II	III	IV	I	II
	\$ billion (quarterly data seasonally adjusted at annual rates)							
Gross national product	4,243.6	4,524.3	4,880.6	4,838.5	4,926.9	5,017.3	5,113.1	5,203.8
Personal consumption expenditures	2,797.4	3,010.8	3,235.1	3,204.9	3,263.4	3,324.0	3,381.4	3,446.8
Durable goods	406.0	421.0	455.2	454.6	452.5	467.4	466.4	471.0
Nondurable goods	942.0	998.1	1,052.3	1,042.4	1,066.2	1,078.4	1,098.3	1,122.0
Clothing & shoes	166.8	177.2	186.8	183.6	188.9	193.9	195.0	199.2
Food & beverages	500.0	529.2	559.7	554.5	567.8	574.1	587.3	592.8
Services	1,449.5	1,591.7	1,727.6	1,707.9	1,744.7	1,778.2	1,816.7	1,853.8
Gross private domestic investment	659.4	699.9	750.3	748.4	771.1	752.8	769.6	774.7
Fixed investment	652.5	670.6	719.6	719.1	726.5	734.1	742.0	747.4
Change in business inventories	6.9	29.3	30.6	29.3	44.6	18.7	27.7	27.3
Net exports of goods & services	-97.4	-112.6	-73.7	-74.9	-66.2	-70.8	-54.0	-52.7
Government purchases of goods & services	872.2	926.1	968.9	960.1	958.6	1,011.4	1,016.0	1,034.9
1982 \$ billion (quarterly data seasonally adjusted at annual rates)								
Gross national product	3,717.9	3,853.7	4,024.4	4,010.7	4,042.7	4,069.4	4,106.8	4,134.0
Personal consumption expenditures	2,446.4	2,513.7	2,598.4	2,586.8	2,608.1	2,627.7	2,641.0	2,655.3
Durable goods	384.4	389.6	413.6	414.8	410.7	420.5	419.3	424.9
Nondurable goods	878.1	890.4	904.5	899.2	910.3	912.0	915.0	910.0
Clothing & shoes	157.4	159.6	161.3	157.1	164.1	164.6	165.0	166.2
Food & beverages	447.1	452.7	460.0	459.8	461.9	462.1	466.0	461.9
Services	1,183.8	1,233.7	1,280.2	1,272.8	1,287.0	1,295.2	1,306.7	1,320.4
Gross private domestic investment	639.6	674.0	715.8	713.5	733.6	709.1	721.1	719.2
Fixed investment	634.1	650.3	687.9	692.0	696.1	690.8	696.6	700.1
Change in business inventories	5.6	23.7	27.9	21.5	37.5	18.3	24.5	19.0
Net exports of goods & services	-129.7	-115.7	-74.9	-72.6	-74.9	-73.8	-55.0	-52.5
Government purchases of goods & services	761.6	781.8	785.1	783.0	775.9	806.4	799.7	812.0
GNP implicit price deflator (% change)	2.6	3.2	3.3	4.8	4.4	4.7	4.0	4.6
Disposable personal income (\$ bil.)	3,013.3	3,205.9	3,477.8	3,435.9	3,511.7	3,587.4	3,689.5	3,747.0
Disposable per. income (1982 \$ bil.)	2,635.3	2,676.6	2,793.2	2,773.3	2,806.4	2,835.9	2,881.7	2,886.6
Per capita disposable per. income (\$)	12,469	13,140	14,116	13,966	14,235	14,504	14,884	15,081
Per capita dis. per. income (1982 \$)	10,905	10,970	11,337	11,273	11,377	11,466	11,625	11,618
U.S. population, total, incl. military abroad (mil.)	241.6	243.9	246.4	246.0	246.7	247.3	247.9	248.4
Civilian population (mil.)	239.4	241.7	244.1	243.8	244.5	245.1	245.7	246.1
	Annual			1988	1989			
	1986	1987	1988	July	Apr	May	June	July P
Monthly data seasonally adjusted								
Industrial production (1977=100)	125.1	129.8	137.2	138.0	141.7	141.6	141.4	141.7
Leading economic indicators (1982=100)	132.1	139.6	142.5	142.7	145.6	143.7	143.7	144.0
Civilian employment (mil. persons)	109.6	112.4	115.0	115.0	117.1	117.2	117.5	117.5
Civilian unemployment rate (%)	7.0	6.2	5.5	5.4	5.3	5.2	5.3	5.2
Personal income (\$ bil. annual rate)	3,526.2	3,777.6	4,064.5	4,079.8	4,386.8	4,395.7	4,416.2	4,449.0
Money stock-M2 (daily avg.) (\$ bil.) 1/	2,811.2	2,909.9	3,069.5	3,023.9	3,080.6	3,072.1	3,088.0	3,117.3
Three-month Treasury bill rate (%)	5.98	5.82	6.69	6.73	8.70	8.40	8.22	7.92
AAA corporate bond yield (Moody's) (%)	9.02	9.38	9.71	9.96	9.79	9.57	9.10	8.94
Housing starts (1,000) 2/	1,805	1,621	1,488	1,478	1,343	1,308	1,419	1,430
Auto sales at retail, total (mil.)	11.4	10.3	10.6	10.6	10.8	10.3	9.8	10.2
Business inventory/sales ratio	1.55	1.51	1.50	1.50	1.49	1.50	1.51	--
Sales of all retail stores (\$ bil.)	121.2	125.5	134.4	135.6	141.4	142.5	142.4 P	143.7
Nondurable goods stores (\$ bil.)	73.9	76.9	83.6	83.3	87.5	88.4	88.8 P	89.2
Food stores (\$ bil.)	24.6	25.3	27.6	27.7	29.2	29.6	29.6 P	29.7
Eating & drinking places (\$ bil.)	12.1	12.7	13.1	13.1	13.6	13.6	13.7 P	13.9
Apparel & accessory stores (\$ bil.)	6.7	7.1	7.0	6.8	7.2	7.3	7.4 P	7.3

1/ Annual data as of December of the year listed. 2/ Private, including farm. R = revised. P = preliminary. -- = not available.

Information contact: Ann Duncan (202) 786-3313.

Table 3.—Foreign Economic Growth, Inflation, & Export Earnings

	Average 1975-79	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989 P	1990 F
Annual percent change												
Total foreign												
Real GNP	3.7	2.6	1.6	1.7	2.0	3.2	3.0	2.8	3.1	4.0	3.3	3.0
CPI	14.0	17.1	15.8	14.7	18.8	22.8	22.1	11.8	16.6	34.4	70.9	58.8
Export earnings	14.6	22.2	-2.7	-7.0	-2.6	5.6	1.9	11.0	16.6	13.3	9.4	9.8
Developed less U.S.												
Real GNP	3.1	2.4	1.4	1.1	1.9	3.4	3.3	2.4	3.1	3.9	3.6	2.7
CPI	9.4	10.9	9.6	8.0	6.0	5.1	4.7	2.8	2.6	2.9	4.2	3.6
Export earnings	14.9	17.0	-3.3	-4.3	-0.5	6.3	4.6	19.4	17.6	12.5	8.1	10.4
Centrally planned *												
Real GNP	3.3	3.8	1.1	2.4	2.0	3.8	1.1	2.4	2.3	4.0	3.8	4.3
Export earnings	16.1	16.5	3.4	6.0	8.2	1.5	-5.1	7.3	6.7	3.5	5.9	7.6
Latin America												
Real GNP	5.1	5.4	0.9	-0.5	-3.2	3.5	3.7	4.1	3.0	0.5	-1.8	1.8
CPI	53.7	64.0	67.9	75.1	130.0	177.9	184.9	88.9	140.5	318.0	700.8	578.8
Export earnings	12.8	30.1	5.3	-10.1	-0.8	6.7	-7.6	-14.5	9.1	17.2	7.9	4.8
Africa & Middle East												
Real GNP	6.4	1.3	0.0	1.4	0.1	1.1	0.0	-1.2	1.4	3.4	3.6	3.3
CPI	16.4	24.6	17.3	12.9	16.7	19.4	11.2	11.7	13.3	23.7	20.7	17.4
Export earnings	13.2	37.9	-9.2	-19.7	-17.5	-6.1	-4.0	-20.9	16.1	18.8	5.9	4.8
Asia												
Real GNP	6.8	6.3	6.6	3.6	6.6	5.4	4.0	5.8	7.0	8.8	6.4	5.7
CPI	8.4	14.2	14.1	7.3	7.7	8.5	5.2	4.5	5.5	6.7	7.9	7.9
Export earnings	18.6	27.8	6.8	-0.3	3.4	13.1	-1.2	6.0	28.0	25.4	14.9	12.0

* Includes People's Republic of China. P = preliminary. F = forecast.

Information contact: Timothy Baxter (202) 786-1706.

Farm Prices

Table 4.—Indexes of Prices Received & Paid by Farmers, U.S. Average

	Annual			1988	1989					
	1986	1987	1988	Aug	Mar	Apr	May	June	July R	Aug P
1977=100										
Prices received										
All farm products	123	126	138	146	149	147	149	147	146	144
All crops	107	106	126	136	136	140	141	138	134	128
Food grains	109	103	137	147	162	161	160	154	153	155
Feed grains & hay	98	85	120	138	138	139	138	131	126	119
Feed grains	96	81	117	137	132	131	130	125	122	115
Cotton	91	99	95	89	93	97	97	97	100	106
Tobacco	138	129	132	131	143	144	144	144	143	141
Oil-bearing crops	77	79	108	120	112	110	109	107	104	93
Fruit, all	169	181	181	182	158	166	201	197	159	173
Fresh market 1/	177	194	194	197	166	176	216	212	163	179
Commercial vegetables	130	144	142	153	149	171	153	152	168	143
Fresh market	123	147	137	147	146	168	145	149	170	138
Potatoes & dry beans	114	126	124	152	194	208	223	211	233	205
Livestock & products	138	146	150	152	161	154	156	157	157	160
Meat animals	145	163	168	169	176	170	171	172	174	177
Dairy products	129	129	126	122	131	127	126	127	130	133
Poultry & eggs	128	107	118	138	150	139	147	144	138	139
Prices paid										
Commodities & services,										
interest, taxes, & wage rates	159	161	170	--	--	177	--	--	178	--
Production items	144	147	157	--	--	165	--	--	165	--
Feed	108	103	128	--	--	140	--	--	133	--
Feeder livestock	153	179	192	--	--	185	--	--	193	--
Seed	148	148	150	--	--	170	--	--	170	--
Fertilizer	124	118	130	--	--	141	--	--	141	--
Agricultural chemicals	127	124	126	--	--	133	--	--	133	--
Fuels & energy	162	161	163	--	--	185	--	--	188	--
Farm & motor supplies	144	145	148	--	--	155	--	--	155	--
Autos & trucks	198	208	215	--	--	226	--	--	225	--
Tractors & self-propelled machinery	174	174	181	--	--	192	--	--	192	--
Other machinery	182	185	197	--	--	209	--	--	209	--
Building & fencing	136	137	138	--	--	140	--	--	141	--
Farm services & cash rent	145	146	147	--	--	151	--	--	151	--
Interest payable per acre on farm real estate debt	211	190	186	--	--	190	--	--	190	--
Taxes payable per acre on farm real estate	138	139	142	--	--	144	--	--	144	--
Wage rates (seasonally adjusted)	160	167	172	--	--	186	--	--	186	--
Production items, interest, taxes, & wage rates	150	151	160	--	--	167	--	--	167	--
Ratio, prices received to prices paid (X)2/	77	79	82	84	85	83	84	83	82	81
Prices received (1910-14=100)	561	578	631	660	679	672	680	673	667	660
Prices paid, etc. (parity index) (1910-14=100)	1,093	1,110	1,167	--	--	1,220	--	--	1,226	--
Parity ratio (1910-14=100) (X)2/	51	52	54	56	--	55	--	--	54	--

1/ Fresh market for noncitrus; fresh market & processing for citrus. 2/ Ratio of index of prices received for all farm products to index of prices paid for commodities and services, interest, taxes, and wage rates. Ratio derived using the most recent prices paid index. Prices paid data are quarterly and will be published in January, April, July, and October. P = preliminary. R = revised.

-- = not available.

Information contact: Ann Duncan (202) 786-3313.

Table 5.—Prices Received by Farmers, U.S. Average

	Annual 1/			1988	1989					
	1986	1987	1988	Aug	Mar	Apr	May	June	July R	Aug P
Crops										
All wheat (\$/bu.)	2.71	2.55	3.33	3.61	4.07	4.03	4.01	3.84	3.78	3.83
Rice, rough (\$/cwt)	5.04	4.59	7.79	7.43	6.47	6.66	6.76	6.94	7.33	7.20
Corn (\$/bu.)	1.96	1.56	2.27	2.65	2.59	2.56	2.58	2.52	2.47	2.29
Sorghum (\$/cwt)	3.11	2.56	3.66	4.41	4.03	4.16	4.02	3.90	3.99	3.89
All hay, baled (\$/ton)	61.64	62.42	78.17	82.10	98.10	104.00	104.00	94.80	85.40	82.80
Soybeans (\$/bu.)	5.00	5.08	7.21	8.33	7.51	7.29	7.21	7.06	6.83	5.93
Cotton, upland (cts./lb.)	54.8	59.6	57.2	53.9	56.3	58.9	58.8	58.8	60.6	64.3
Potatoes (\$/cwt)	5.03	4.35	5.49	5.86	7.45	8.15	8.94	8.45	9.47	8.18
Lettuce (\$/cwt)	11.90	14.70	15.20	13.00	13.60	9.07	7.48	13.50	16.30	11.40
Tomatoes (\$/cwt)	25.10	26.00	26.80	38.00	34.10	55.80	43.60	27.90	28.40	26.00
Onions (\$/cwt)	10.90	12.50	9.99	8.85	9.70	10.90	9.58	13.60	16.70	16.90
Dry edible beans (\$/cwt)	19.10	17.67	22.38	25.90	33.00	32.80	32.00	31.10	31.90	30.70
Apples for fresh use (cts./lb.)	19.8	17.6	16.7	24.5	16.1	14.6	14.1	10.8	9.8	16.1
Pears for fresh use (\$/ton)	369.00	227.00	347.00	326.00	328.00	290.00	448.00	493.00	480.00	398.00
Oranges, all uses (\$/box) 2/	4.27	5.03	6.56	4.90	5.27	6.64	8.52	8.10	5.04	4.28
Grapefruit, all uses (\$/box) 2/	4.29	4.96	5.39	4.09	3.36	3.28	4.05	4.85	4.62	7.24
Livestock										
Beef cattle (\$/cwt)	52.80	61.40	66.80	65.90	72.00	70.00	68.80	67.60	68.00	69.60
Calves (\$/cwt)	60.90	78.10	89.80	91.00	94.00	90.50	91.20	94.20	94.70	94.50
Hogs (\$/cwt)	50.10	50.80	42.50	44.70	39.30	36.90	41.60	45.10	45.90	46.10
Lambs (\$/cwt)	69.10	77.90	69.50	59.80	72.50	75.20	73.10	70.60	68.60	67.40
All milk, sold to plants (\$/cwt)	12.50	12.53	12.22	11.80	12.70	12.30	12.20	12.30	12.60	12.90
Milk, manuf. grade (\$/cwt)	11.46	11.37	11.15	10.90	11.30	11.20	11.20	11.30	11.60	12.00
Broilers (cts./lb.)	34.5	28.8	34.0	42.3	38.7	38.9	45.2	42.6	39.1	36.1
Eggs (cts./doz.) 3/	61.2	53.1	53.2	58.1	80.1	65.3	62.0	63.3	64.0	71.0
Turkeys (cts./lb.)	44.4	34.3	36.5	42.0	40.0	42.3	43.4	44.0	41.5	41.3
Wool (cts./lb.) 4/	64.3	87.1	138.0	122.0	130.0	135.0	139.0	139.0	120.0	105.00

1/ Calendar year averages, except for potatoes, dry edible beans, apples, oranges, & grapefruit, which are crop years.
 2/ Equivalent on-tree returns. 3/ Average of all eggs sold by producers including hatching eggs & eggs sold at retail.
 4/ Average local market price, excluding incentive payments. P = preliminary. R = revised.

Information contact: Ann Duncan (202) 786-3313.

Producer & Consumer Prices

Table 6.—Consumer Price Index for All Urban Consumers, U.S. Average (Not Seasonally Adjusted)

	Annual	1988		1989						
	1988	July	Dec	Jan	Feb	Mar	Apr	May	June	July
				1982-84=100						
Consumer Price Index, all items	118.3	118.5	120.5	121.1	121.6	122.3	123.1	123.8	124.1	124.4
Consumer Price Index, less food	118.3	118.4	120.4	120.8	121.3	122.0	122.9	123.5	123.9	124.2
All food	118.2	118.8	120.7	122.2	122.9	123.5	124.2	124.9	125.0	125.5
Food away from home	121.8	122.1	124.1	124.7	125.2	125.7	126.2	126.7	127.1	127.8
Food at home	116.6	117.3	119.1	121.2	122.0	122.7	123.5	124.4	124.3	124.8
Meats 1/	112.2	113.4	112.7	114.0	114.3	115.5	115.6	115.6	116.1	116.7
Beef & veal	112.1	113.4	114.6	116.0	116.6	119.0	119.0	119.6	119.3	119.5
Pork	112.5	114.3	109.6	111.5	110.9	111.0	111.2	110.1	111.8	113.6
Poultry	120.7	129.0	127.1	128.8	128.4	130.3	133.0	137.3	140.1	138.1
Fish	137.4	138.1	138.9	144.0	142.9	144.3	143.3	142.3	142.9	142.3
Eggs	93.6	95.1	99.6	112.0	106.1	122.9	117.6	112.6	110.6	112.8
Dairy products 2/	108.4	107.6	111.4	112.6	113.4	113.8	114.1	113.8	113.6	114.1
Fats & oils 3/	113.1	112.6	118.5	119.6	120.5	120.4	121.6	121.6	121.6	121.6
Fresh fruit	143.0	147.8	143.2	145.4	150.0	149.5	152.4	158.1	151.7	150.6
Processed fruit	122.0	123.0	124.4	125.6	125.5	124.7	124.6	125.1	125.6	126.0
Fresh vegetables	129.3	127.0	133.0	141.4	144.4	140.2	144.1	153.2	150.8	150.8
Potatoes	119.1	125.7	128.5	130.8	138.3	146.6	158.9	164.0	172.5	180.7
Processed vegetables	112.2	111.3	118.9	120.9	121.8	122.7	124.4	124.9	125.5	126.3
Cereals & bakery products	122.1	122.1	126.6	127.9	128.9	129.7	130.4	131.5	132.1	133.3
Sugar & sweets	114.0	114.0	116.7	117.2	117.8	118.0	117.9	118.1	119.2	120.1
Beverages, nonalcoholic	107.5	107.2	107.8	109.6	111.3	111.3	111.8	111.5	111.6	112.3
Apparel commodities less footwear	114.4	111.3	116.8	113.5	113.4	118.1	120.0	119.3	116.1	112.8
Footwear	109.9	108.2	113.5	112.2	112.7	114.1	115.3	114.9	114.0	113.4
Tobacco & smoking products	145.8	147.5	149.9	157.0	158.5	159.2	159.5	161.1	164.2	167.5
Beverages, alcoholic	118.6	119.2	119.9	120.3	121.1	121.8	122.3	123.1	123.5	124.0

1/ Beef, veal, lamb, pork, & processed meat. 2/ Includes butter. 3/ Excludes butter.

Information contact: Ann Duncan (202) 786-3313.

Table 7.—Producer Price Indexes, U.S. Average (Not Seasonally Adjusted)

	Annual			1988	1989					
	1986	1987	1988	July	Feb.	Mar R	Apr	May	June	July
	1982=100									
Finished goods 1/	103.2	105.4	108.0	108.6	111.7	112.1	113.0	114.2	114.1	114.0
Consumer foods	107.2	109.5	112.6	113.6	117.2	118.3	117.8	119.1	118.4	119.0
Fresh fruit	112.9	112.0	112.7	117.7	113.2	113.5	104.5	109.4	112.2	114.1
Fresh & dried vegetables	97.8	103.7	105.4	104.7	133.3	123.8	119.3	142.9	128.9	124.6
Dried fruit	91.9	95.0	99.1	99.3	101.0	101.9	102.9	102.3	102.8	102.8
Canned fruit & juice	111.0	115.3	120.1	120.2	121.9	121.8	122.0	122.0	122.7	123.4
Frozen fruit & juice	103.0	113.3	129.9	130.4	122.1	121.1	119.6	122.3	128.4	129.0
Fresh veg. excl. potatoes	99.3	99.0	100.4	96.9	119.9	111.0	107.1	140.4	117.0	110.5
Canned veg. & juices	101.2	103.5	108.3	107.8	118.4	119.8	119.4	119.7	119.0	118.9
Frozen vegetables	106.6	107.3	108.5	107.3	114.5	114.8	115.3	115.3	115.7	115.5
Potatoes	104.0	120.1	114.1	104.2	178.3	162.0	152.7	150.8	161.8	157.8
Eggs	99.5	87.6	88.6	95.7	96.7	135.8	110.8	107.0	104.8	111.0
Bakery products	116.6	118.4	126.4	126.0	133.1	133.1	133.7	134.4	134.9	135.3
Meats	93.9	100.4	99.9	102.0	102.8	104.0	103.2	103.5	103.4	105.8
Beef & veal	88.1	95.5	101.4	101.4	108.1	111.3	112.2	111.7	106.6	108.1
Pork	99.9	104.9	95.2	101.7	93.6	92.4	88.5	90.0	96.9	101.9
Processed poultry	116.7	103.4	111.4	124.9	116.3	123.2	125.1	132.2	130.6	125.9
Fish	124.9	140.0	151.7	142.6	152.7	153.2	158.3	157.5	139.1	137.3
Dairy products	99.9	101.6	102.2	101.2	106.5	106.0	105.5	105.7	106.4	107.8
Processed fruits & vegetables	104.9	108.6	113.8	113.4	118.8	119.2	119.1	119.9	120.7	120.8
Shortening & cooking oil	103.3	103.9	118.9	126.8	115.4	117.9	117.9	119.3	116.7	117.1
Consumer finished goods less foods	98.4	100.7	103.1	103.8	106.6	106.8	108.9	110.4	110.3	109.7
Beverages, alcoholic	110.1	110.3	111.9	111.5	113.9	115.1	115.5	116.5	116.8	116.9
Soft drinks	109.5	111.8	114.1	113.2	116.6	117.3	118.4	118.0	117.4	117.5
Apparel	106.3	108.3	111.7	112.1	114.1	113.7	114.0	114.2	114.1	114.2
Footwear	106.8	109.3	115.2	115.5	119.5	119.8	119.4	119.8	120.1	120.6
Tobacco products	142.4	154.6	171.9	175.4	187.3	187.3	187.4	187.4	196.8	196.8
Intermediate materials 2/	99.1	101.5	107.1	108.2	111.0	111.5	112.3	112.7	112.6	112.6
Materials for food manufacturing	98.4	100.8	106.0	109.9	110.1	111.4	111.5	112.4	112.1	112.9
Flour	94.5	92.9	105.7	111.0	114.1	116.5	113.7	115.9	116.5	115.0
Refined sugar 3/	103.2	106.4	108.6	108.2	115.8	116.0	116.1	117.0	116.9	118.1
Crude vegetable oils	84.8	84.2	116.8	147.6	103.7	109.8	107.4	114.7	103.1	100.3
Crude materials 4/	87.7	93.7	96.0	97.3	101.2	103.2	104.1	106.3	103.9	103.7
Foodstuffs & feedstuffs	93.2	96.2	106.0	110.1	111.0	113.7	111.4	115.0	111.4	109.7
Fruits & vegetables 5/	103.9	106.8	108.1	109.9	123.8	118.7	112.3	127.5	121.0	119.4
Grains	79.2	71.1	97.9	111.5	111.3	115.1	109.8	114.1	105.8	105.1
Livestock	91.8	102.0	103.0	99.7	104.6	106.8	105.9	106.9	105.5	104.3
Poultry, live	129.6	101.2	121.5	156.4	121.5	138.5	138.4	155.0	148.5	135.5
Fibers, plant & animal	88.3	106.4	98.4	99.4	94.8	98.4	105.0	108.1	110.5	111.4
Fluid milk	90.9	91.8	89.1	84.9	94.7	91.3	90.0	89.7	90.3	92.1
Oilseeds	91.4	99.2	134.0	152.3	133.2	140.0	130.7	137.5	127.5	129.7
Tobacco, leaf	89.7	85.7	87.2	82.0	93.1	93.1	93.1	93.7	93.7	93.7
Sugar, raw cane	104.9	110.2	111.9	118.0	111.9	112.3	112.3	113.8	115.4	118.5
All commodities	100.1	102.8	106.9	107.9	110.8	111.5	112.3	113.1	112.8	112.7
Industrial commodities	99.9	102.5	106.3	106.8	110.1	110.5	111.7	112.4	112.3	112.2
All foods 6/	105.5	107.8	111.5	113.3	117.4	116.8	118.4	117.4	118.1	
Farm products & processed foods & feeds	101.2	103.7	110.0	112.9	114.6	116.1	115.1	116.9	115.2	115.4
Farm products	92.9	95.5	104.8	109.1	110.8	113.8	110.5	114.9	111.4	110.0
Processed foods & feeds 6/	105.4	107.9	112.8	115.0	116.6	117.5	117.5	118.1	117.3	118.2
Cereal & bakery products	111.0	112.6	122.9	124.1	129.0	129.2	129.3	130.8	130.8	132.1
Sugar & confectionery	109.6	112.6	114.6	115.9	118.3	118.6	120.0	119.6	120.6	121.5
Beverages	114.5	112.5	114.3	113.8	117.7	118.7	119.4	119.5	119.6	119.3

1/ Commodities ready for sale to ultimate consumer. 2/ Commodities requiring further processing to become finished goods. 3/ All types & sizes of refined sugar. 4/ Products entering market for the first time that have not been manufactured at that point. 5/ Fresh & dried. 6/ Includes all raw, intermediate, & processed foods (excludes soft drinks, alcoholic beverages, & manufactured animal feeds). R = revised.

Information contact: Ann Duncan (202) 786-3313.

Farm-Retail Price Spreads

Table 8.—Farm-Retail Price Spreads

	Annual				1988	1989					
	1985	1986	1987	1988	July	Feb	Mar	Apr	May	June	July
Market basket 1/											
Retail cost (1982-84=100)	104.1	106.3	111.6	116.5	117.3	122.3	122.9	123.6	124.7	124.7	125.2
Farm value (1982-84=100)	96.2	94.9	97.1	100.3	103.8	106.4	107.2	106.6	108.7	106.7	107.4
Farm-retail spread (1982-84=100)	108.3	112.5	119.4	125.3	124.6	130.8	131.4	132.7	133.3	134.5	134.7
Farm value-retail cost (%)	32.4	31.2	30.5	30.1	31.0	30.5	30.5	30.2	30.5	29.9	30.0
Meat products											
Retail cost (1982-84=100)	98.9	102.0	109.6	112.2	113.4	114.3	115.5	115.6	115.6	116.1	116.7
Farm value (1982-84=100)	91.3	94.3	101.2	99.5	97.5	102.6	103.7	103.4	103.2	103.6	103.4
Farm-retail spread (1982-84=100)	106.7	109.8	118.3	125.2	129.7	126.3	127.6	128.1	128.3	128.9	130.3
Farm value-retail cost (%)	46.8	46.8	46.7	44.9	43.6	45.5	45.5	45.3	45.2	45.2	44.9
Dairy products											
Retail cost (1982-84=100)	103.2	103.3	105.9	108.4	107.6	113.4	113.8	114.1	113.8	113.6	114.1
Farm value (1982-84=100)	95.2	92.6	93.3	90.4	86.9	97.7	94.3	93.0	91.7	92.5	92.0
Farm-retail spread (1982-84=100)	110.5	113.3	117.5	124.9	126.7	127.9	131.7	133.5	134.2	133.0	134.5
Farm value-retail cost (%)	44.2	43.0	42.3	40.0	38.7	41.3	39.8	39.1	38.6	39.1	38.7
Poultry											
Retail cost (1982-84=100)	106.2	114.2	112.6	120.7	129.0	128.4	130.3	133.0	137.3	140.1	138.1
Farm value (1982-84=100)	105.9	115.1	93.8	110.4	133.2	113.9	124.3	125.9	143.5	136.8	126.1
Farm-retail spread (1982-84=100)	106.6	113.3	134.2	132.6	124.2	145.1	137.3	141.2	130.1	143.9	152.0
Farm value-retail cost (%)	53.3	53.9	44.6	49.0	55.3	47.5	51.0	50.7	55.9	52.2	48.9
Eggs											
Retail cost (1982-84=100)	91.0	97.2	91.5	93.6	95.1	106.1	122.9	117.6	112.6	110.6	112.8
Farm value (1982-84=100)	85.7	92.4	76.8	76.7	84.9	92.3	128.0	99.8	93.3	95.5	97.3
Farm-retail spread (1982-84=100)	100.4	106.0	117.9	123.9	113.4	130.9	113.7	149.5	147.2	137.7	140.7
Farm value-retail cost (%)	60.5	61.0	53.9	52.7	57.4	55.9	66.9	54.5	53.2	55.5	55.4
Cereal & bakery products											
Retail cost (1982-84=100)	107.9	110.9	114.8	122.1	122.1	128.9	129.7	130.4	131.5	132.1	133.3
Farm value (1982-84=100)	94.3	76.3	71.0	92.3	99.5	101.0	103.1	103.3	104.3	103.5	101.6
Farm-retail spread (1982-84=100)	109.8	115.7	120.9	126.3	125.3	132.8	133.4	134.2	135.3	136.1	137.7
Farm value-retail cost (%)	10.7	8.4	7.6	9.3	10.0	9.6	9.7	9.7	9.7	9.6	9.3
Fresh fruits											
Retail cost (1982-84=100)	118.4	120.4	135.6	145.4	150.7	154.3	151.6	151.0	157.3	152.6	152.3
Farm value (1982-84=100)	110.8	103.8	113.9	113.3	134.4	101.5	92.3	82.8	95.8	86.9	98.8
Farm-retail spread (1982-84=100)	121.8	128.0	145.7	160.2	158.2	178.7	179.0	182.5	185.7	182.9	177.0
Farm value-retail cost (%)	29.6	27.4	26.5	24.6	28.2	20.8	19.2	17.3	19.2	18.0	20.5
Fresh vegetables											
Retail cost (1982-84=100)	103.5	107.7	121.6	129.3	127.0	144.4	140.2	144.1	153.2	150.8	150.8
Farm value (1982-84=100)	93.1	90.0	112.0	105.8	101.6	144.5	120.1	142.7	153.4	133.0	158.0
Farm-retail spread (1982-84=100)	108.9	116.8	126.5	141.3	140.1	144.3	150.5	144.8	153.1	160.0	147.1
Farm value-retail cost (%)	30.5	28.4	31.3	27.8	27.2	34.0	29.1	33.6	34.0	29.9	35.6
Processed fruits & vegetables											
Retail cost (1982-84=100)	107.0	105.3	109.0	117.6	117.8	123.7	123.7	124.3	124.9	125.4	126.0
Farm value (1982-84=100)	117.7	101.5	111.1	136.5	140.1	135.4	134.4	131.1	132.8	132.9	135.0
Farm-retail spread (1982-84=100)	103.7	106.4	108.3	111.7	110.8	120.0	120.4	121.6	122.4	123.1	123.2
Farm value-retail cost (%)	26.2	22.9	24.2	27.6	28.3	26.0	25.8	25.4	25.3	25.2	25.5
Fats & oils											
Retail cost (1982-84=100)	108.9	106.5	108.1	113.1	112.6	120.5	120.4	121.6	121.6	121.6	121.6
Farm value (1982-84=100)	104.3	76.2	74.1	103.3	132.6	99.2	103.1	105.4	104.6	99.2	91.3
Farm-retail spread (1982-84=100)	110.6	117.6	120.6	116.7	105.2	128.3	126.8	127.6	127.8	129.8	132.8
Farm value-retail cost (%)	25.8	19.2	18.6	24.6	31.7	22.2	23.0	23.3	23.1	21.9	20.2

	Annual				1988	1989					
	1985	1986	1987	1988	July	Feb	Mar	Apr	May	June	July
Beef, Choice											
Retail price 2/ (cts./lb.)	232.6	230.7	242.5	254.7	259.3	265.2	269.5	269.8	271.9	268.1	271.6
Net carcass value 3/ (csts.)	135.2	133.1	145.3	153.9	144.6	160.9	167.4	169.5	167.7	158.5	156.4
Net farm value 4/ (csts.)	126.8	124.4	137.9	147.4	137.9	157.6	163.9	164.3	160.9	152.5	149.9
Farm-retail spread (csts.)	105.8	106.3	104.6	107.3	121.3	107.6	105.6	105.5	111.0	115.6	121.7
Carcass-retail spread 5/ (csts.)	97.4	97.6	97.2	100.8	114.7	104.3	102.1	100.3	104.2	109.6	115.2
Farm-carcass spread 6/ (csts.)	8.4	8.7	7.4	6.5	6.7	3.3	3.5	5.2	6.8	6.0	6.5
Farm value-retail price (%)	55	54	57	58	53	59	61	61	59	57	55
Pork											
Retail price 2/ (csts./lb.)	162.0	178.4	188.4	183.4	187.4	179.3	179.7	179.5	177.1	179.1	182.8
Wholesale value 3/ (csts.)	101.1	110.9	113.0	101.0	100.0	92.7	91.8	88.6	95.5	99.6	100.6
Net farm value 4/ (csts.)	71.4	82.4	82.7	69.4	72.6	65.2	63.3	59.0	68.4	74.0	75.2
Farm-retail spread (csts.)	90.6	96.0	105.7	114.0	114.8	114.1	116.4	120.5	108.7	105.1	107.6
Wholesale-retail spread 5/ (csts.)	60.9	67.5	75.4	82.4	87.4	86.6	87.9	90.9	81.6	79.5	82.2
Farm-wholesale spread 6/ (csts.)	29.7	28.5	30.3	31.6	27.4	27.5	28.5	29.6	27.1	25.6	25.4
Farm value-retail price (%)	44	46	44	38	39	36	35	33	39	41	41

1/ Retail costs are based on indexes of retail prices for domestically produced farm foods from the CPI-U published monthly by the Bureau of Labor Statistics. The farm value is the payment to farmers for quantity of farm product equivalent to retail unit, less allowance for byproduct. Farm values are based on prices at first point of sale & may include marketing charges such as grading & packing for some commodities. The farm-retail spread is the difference between the retail price & the farm value, represents charges for assembling, processing, transporting, distributing these foods. 2/ Estimated weighted average price of retail cuts from pork & choice yield grade 3 beef carcasses. Retail cut prices from BLS. 3/ Value of carcass quantity (beef) & wholesale cuts (pork) equivalent to 1 lb. of retail cuts; beef adjusted for value of fat & bone byproducts. 4/ Market value to producer for quantity of live animal equivalent to 1 lb. of retail cuts minus value of byproducts. 5/ Represents charges for retailing & other marketing services such as fabricating, wholesaling, in-city transportation. 6/ Represents charges made for livestock marketing, processing, & transportation to city where consumed.

Information contacts: Denis Dunham (202) 786-1870, Ron Gustafson (202) 786-1286.

Table 9.—Price Indexes of Food Marketing Costs

(See the September 1989 Issue.)

Information contact: Denis Dunham (202) 786-1870.

Livestock & Products

Table 10.—U.S. Meat Supply & Use

	Beg. stocks	Pro- duc- tion 1/	Im- ports	Total supply	Ex- ports	Ship- ments	Ending stocks	Consumption		Primary market price 3/
								Total	Per capita 2/	
									Pounds	
Million pounds 4/										
Beef										
1986	420	24,371	2,129	26,919	521	52	412	25,935	78.4	57.75
1987	412	23,566	2,269	26,247	604	52	386	25,205	73.4	64.60
1988	386	23,589	2,379	26,354	680	64	422	25,188	72.1	69.54
1989 F	422	22,921	2,180	25,523	905	60	325	24,233	68.7	72-74
Pork										
1986	289	14,063	1,122	15,474	86	132	248	15,008	58.6	51.19
1987	248	14,374	1,195	15,817	109	124	347	15,237	59.1	51.69
1988	347	15,684	1,137	17,168	195	126	413	16,434	63.1	43.39
1989 F	413	15,926	1,000	17,339	200	140	370	16,629	63.4	41-43
Veal 5/										
1986	11	524	27	562	5	1	7	550	1.9	60.89
1987	7	429	24	460	7	1	4	449	1.5	78.05
1988	4	396	27	427	10	2	5	410	1.4	89.79
1989 F	5	360	0	365	0	1	5	359	1.2	93-95
Lamb & mutton										
1986	13	338	41	392	2	2	13	375	1.4	70.26
1987	13	315	44	372	2	2	8	360	1.3	78.09
1988	8	335	51	394	1	1	6	386	1.4	68.84
1989 F	6	337	55	398	1	0	7	390	1.4	66-68
Total red meat										
1986	733	39,296	3,319	43,348	613	187	680	41,868	140.2	--
1987	679	38,684	3,533	42,897	722	179	744	41,251	135.3	--
1988	745	40,004	3,594	44,343	886	193	846	42,418	137.9	--
1989 F	846	39,544	3,235	43,625	1,106	201	707	41,611	134.7	--
Broilers										
1986	27	14,316	0	14,342	566	149	24	13,603	56.3	56.9
1987	24	15,594	0	15,618	752	151	25	14,691	60.2	47.4
1988	25	16,180	0	16,205	765	156	36	15,248	61.9	56.3
1989 F	36	17,295	0	17,331	900	140	30	16,260	65.4	59-61
Mature chicken										
1986	144	627	0	771	16	3	163	589	2.4	--
1987	163	650	0	814	15	2	188	608	2.5	--
1988	188	638	0	826	26	3	157	641	2.6	--
1989 F	157	632	0	788	22	4	150	613	2.5	--
Turkeys										
1986	150	3,271	0	3,422	27	4	178	3,212	13.3	72.2
1987	178	3,828	0	4,006	33	4	282	3,686	15.1	57.8
1988	282	3,968	0	4,250	51	5	250	3,945	16.0	61.3
1989 F	250	4,195	0	4,445	38	4	290	4,113	16.5	64-66
Total poultry										
1986	321	18,215	0	18,535	609	156	365	17,405	72.0	--
1987	365	20,072	0	20,437	800	157	495	18,985	77.8	--
1988	495	20,786	0	21,281	842	163	442	19,834	80.5	--
1989 F	442	22,122	0	22,564	960	148	470	20,986	84.4	--
Red meat & poultry										
1986	1,054	57,511	3,319	61,883	1,223	343	1,045	59,273	212.3	--
1987	1,044	58,756	3,532	63,333	1,521	336	1,240	60,229	213.2	--
1988	1,240	60,790	3,594	65,624	1,728	356	1,288	62,251	218.4	--
1989 F	1,288	61,666	3,235	66,189	2,066	349	1,177	62,597	219.1	--

1/ Total including farm production for red meats & federally inspected plus nonfederally inspected for poultry.
 2/ Retail weight basis. (The beef carcass-to-retail conversion factor was .74 during 1962-85. It was lowered to .73 for 1986, .71 for 1987, & 70.5 for 1988 & 89.) 3/ Dollars per cwt for red meat; cents per pound for poultry. Beef: Choice steers, Omaha 1,000-1,100 lb.; pork: barrows and gilts, 7 markets; veal: farm price of calves; lamb & mutton: Choice slaughter lambs, San Angelo; broilers: wholesale 12-city average; turkeys: wholesale NY 8-16 lb. young hens. 4/ Carcass weight for red meats & certified ready-to-cook for poultry. 5/ Beginning 1989 veal trade no longer reported separately. F = forecast. -- = not available.

Information contacts: Ron Gustafson, Leland Southard, or Mark Weimar (202) 786-1285.

Table 11.—U.S. Egg Supply & Use

	Beg. stocks	Pro- duction	Im- ports	Total supply	Ex- ports	Ship- ments	Hatch- ing use	Ending stocks	Consumption		Wholesale price*
									Total	Per capita	
										No.	
Million dozen											
1984	9.3	5,708.3	32.0	5,749.7	58.2	27.8	529.7	11.1	5,122.8	259.4	80.9
1985	11.1	5,688.0	12.7	5,711.8	70.6	30.3	548.1	10.7	5,052.0	253.3	66.4
1986	10.7	5,705.0	13.7	5,729.4	101.6	28.0	566.8	10.4	5,022.6	249.4	71.1
1987	10.4	5,802.3	5.6	5,818.3	111.2	25.1	599.1	14.4	5,068.5	249.3	61.6
1988	14.4	5,771.1	5.3	5,790.8	141.8	26.0	604.9	15.2	5,002.9	243.7	62.1
1989 F	15.2	5,649.9	16.1	5,681.2	112.9	24.0	635.1	10.0	4,899.1	236.4	74-78

* Cartoned grade A large eggs, New York. F = forecast.

Information contact: Maxine Davis (202) 786-1714.

Table 12.—U.S. Milk Supply & Use¹

	Pro- duc- tion	Farm use	Commercial		Im- ports	Total commer- cial supply	CCC net re- movals	Commercial		All milk price 2/ \$/cwt
			Farm market- ings	Beg. stocks				Ending stocks	Disap- pearance	
	Billion pounds									
1981	132.8	2.3	130.5	5.8	2.3	138.5	12.9	5.4	120.3	13.77
1982	135.5	2.4	133.1	5.4	2.5	141.0	14.3	4.6	122.1	13.61
1983	139.7	2.4	137.3	4.6	2.6	144.5	16.8	5.2	122.5	13.58
1984	135.4	2.9	132.5	5.2	2.7	140.5	8.6	4.9	126.9	13.46
1985	143.1	2.5	140.7	4.9	2.8	148.4	13.2	4.6	130.6	12.75
1986	143.4	2.4	141.0	4.6	2.7	148.3	10.6	4.2	133.5	12.51
1987	142.5	2.2	140.3	4.2	2.5	146.9	6.7	4.6	135.6	12.54
1988	145.5	2.2	143.3	4.6	2.4	150.3	8.9	4.3	137.1	12.24
1989 F	145.7	2.2	143.5	4.3	2.3	150.1	8.7	4.2	137.2	13.20

^{1/} Milkfat basis. Totals may not add because of rounding. ^{2/} Delivered to plants & dealers; does not reflect deductions. F = forecast.

Information contact: Jim Miller (202) 786-1770.

Table 13.—Poultry & Eggs

	Annual			1988		1989					
	1986	1987	1988	July	Feb	Mar	Apr	May	June	July	
Broilers											
Federally inspected slaughter, certified (mil. lb.)	14,265.6	15,502.5	15,984.0	1,234.1	1,270.1	1,473.4	1,335.9	1,538.5	1,514.5	1,360.1	
Wholesale price, 12-city (cts./lb.)	56.9	47.4	56.3	66.5	58.1	62.1	63.5	70.4	67.4	62.0	
Price of grower feed (\$/ton)	187	186	220	24.4	24.3	24.2	24.0	23.8	23.7	23.7	
Broiler-feed price ratio 1/	3.7	3.7	3.1	3.4	2.9	3.2	3.2	3.8	3.6	3.3	
Stocks beginning of period (mil. lb.)	26.6	23.9	24.8	41.2	32.8	32.5	32.4	37.9	35.3	33.8	
Broiler-type chicks hatched (mil.) 2/	5,013.3	5,379.2	5,588.7	473.4	442.8	502.5	493.5	522.9	509.8	511.7	
Turkeys											
Federally inspected slaughter, certified (mil. lb.)	3,133	3,717	3,903	322.4	248.1	301.3	268.8	356.9	388.6	359.6	
Wholesale price, Eastern U.S., 8-16 lb. young hens (cts./lb.)	72.2	57.8	61.3	70.8	62.2	65.7	68.3	72.1	73.0	66.4	
Price of turkey grower feed (\$/ton)	215	213	243	27.9	26.4	25.8	25.6	25.5	25.1	25.1	
Turkey-feed price ratio 1/	4.1	3.9	3.0	3.0	2.9	3.1	3.3	3.4	3.5	3.3	
Stocks beginning of period (mil. lb.)	150.2	178.2	282.4	456.8	262.5	263.1	269.2	298.5	355.6	454.6	
Poultz placed in U.S. (mil.)	225.4	240.4	242.0	23.7	23.7	26.9	26.4	28.6	29.1	26.5	
Eggs											
Farm production (mil.)	68,460	69,627	69,253	5,721	5,173	5,777	5,565	5,683	5,479	5,625	
Average number of layers (mil.)	278	280	286	270	272	270	267	267	266	265	
Rate of lay (eggs per layer on farms)	248	248	251	21.2	19.0	21.4	20.7	21.3	20.6	21.2	
Cartoned price, New York, grade A large (cts./doz.) 3/	71.1	61.6	62.1	73.7	71.1	92.1	76.6	73.7	75.2	76.5	
Price of laying feed (\$/ton)	174	170	202	23.8	21.4	21.4	21.1	21.0	21.1	21.0	
Egg-feed price ratio 1/	7.0	7.6	5.3	4.9	5.8	7.5	6.2	5.9	6.0	6.1	
Stocks, first of month											
Shell (mil. doz.)	.72	1.16	1.29	.90	.36	.21	.48	.54	.78	.81	
Frozen (mil. doz.)	10.0	9.8	13.1	19.2	14.9	14.4	11.2	11.7	12.3	11.4	
Replacement chicks hatched (mil.)	424	428	366	24.9	27.2	32.7	35.9	38.3	34.7	30.2	

^{1/} Pounds of feed equal in value to 1 dozen eggs or 1 lb. of broiler or turkey liveweight. ^{2/} Placement of broiler chicks is currently reported for 12 States only; henceforth, hatch of broiler-type chicks will be used as a substitute. ^{3/} Price of cartoned eggs to volume buyers for delivery to retailers.

Information contact: Maxine Davis (202) 786-1714.

Table 14.—Dairy

	Annual			1988		1989				
	1986	1987	1988	July	Feb	Mar	Apr	May	June	July
Milk prices, Minnesota-Wisconsin, 3.5% fat (\$/cwt) 1/	11.30	11.23	11.03	10.52	11.26	10.98	11.09	11.12	11.33	11.76
Wholesale prices										
Butter, grade A Chi. (cts./lb.)	144.5	140.2	132.5	135.9	131.0	131.0	131.0	131.0	131.0	130.3
Am. cheese, Wts. assembly pt. (cts./lb.)	127.3	123.2	123.8	118.3	117.6	117.8	120.4	123.9	130.8	140.6
Nonfat dry milk (cts./lb.) 2/	80.6	79.3	80.2	77.1	83.6	79.6	81.1	84.5	88.5	96.2
USDA net removals										
Total milk equiv. (mil. lb.) 3/	10,628.1	6,706.0	8,856.2	248.8	1,471.6	1,156.5	1,398.8	1,468.3	863.5	167.1
Butter (mil. lb.)	287.6	187.3	312.6	5.2	67.0	54.4	64.1	66.4	40.3	7.7
Am. cheese (mil. lb.)	468.4	282.0	238.1	13.6	8.5	3.0	7.0	9.3	2.9	.2
Nonfat dry milk (mil. lb.)	827.3	559.4	267.5	.7	0	0	0	0	0	0
Milk										
Milk prod. 21 States (mil. lb.)	121,433	121,294	123,896	10,514	9,839	10,860	10,770	11,095	10,435	10,310
Milk per cow (lb.)	13,399	13,955	14,378	1,222	1,152	1,275	1,266	1,305	1,228	1,213
Number of milk cows (1,000)	9,063	8,692	8,617	8,601	8,538	8,520	8,510	8,505	8,501	8,497
U.S. milk production (mil. lb.)	143,381	142,557	145,527	6/12,312	6/11,566	6/12,766	6/12,656	6/13,037	6/12,275	6/12,074
Stock, beginning										
Total (mil. lb.)	13,695	12,867	7,440	11,112	8,927	10,448	11,000	11,870	13,245	13,937
Commercial (mil. lb.)	4,590	4,165	4,646	5,324	4,673	5,018	4,940	5,140	5,763	5,888
Government (mil. lb.)	9,105	8,702	2,794	5,788	4,254	5,430	6,059	6,729	7,482	8,048
Imports, total (mil. lb.) 3/	2,733	2,490	2,394	208	169	178	177	162	179	--
Commercial disappearance (mil. lb.)	133,498	135,657	137,187	12,035	9,747	11,677	11,051	10,919	11,282	--
Butter										
Production (mil. lb.)	1,202.4	1,104.1	1,207.5	76.3	124.7	135.7	124.7	122.5	95.3	72.2
Stocks, beginning (mil. lb.)	205.5	193.0	143.2	293.4	246.6	314.4	341.9	379.1	438.3	464.2
Commercial disappearance (mil. lb.)	922.9	902.5	909.8	71.4	47.8	86.9	55.6	35.3	53.4	--
American cheese										
Production (mil. lb.)	2,798.2	2,716.7	2,756.6	232.5	208.7	231.9	236.2	247.0	240.0	226.8
Stocks, beginning (mil. lb.)	850.2	697.1	370.4	412.5	288.4	293.5	284.6	288.7	311.8	317.4
Commercial disappearance (mil. lb.)	2,382.8	2,437.1	2,570.0	224.4	189.1	228.5	228.8	220.4	237.3	--
Other cheese										
Production (mil. lb.)	2,411.1	2,627.7	2,815.0	222.3	210.8	256.5	236.4	247.9	245.6	237.8
Stocks, beginning (mil. lb.)	94.1	92.0	89.7	99.0	111.4	111.4	110.9	117.0	115.8	120.4
Commercial disappearance (mil. lb.)	2,684.9	2,880.2	3,034.1	235.4	225.2	274.2	245.6	265.9	258.7	--
Nonfat dry milk										
Production (mil. lb.)	1,284.1	1,056.8	978.5	80.1	85.6	95.7	99.8	99.8	81.0	60.8
Stocks, beginning (mil. lb.)	1,011.1	686.8	177.2	160.4	66.3	84.4	88.3	100.8	100.7	78.3
Commercial disappearance (mil. lb.)	479.1	492.9	733.1	77.3	66.5	91.0	86.5	99.4	101.9	--
Frozen dessert										
Production (mil. gal.) 4/	1,248.6	1,260.7	1,246.9	126.8	86.6	108.0	104.3	122.6	128.4	122.5

1/ Manufacturing grade milk. 2/ Prices paid f.o.b. Central States production area, high heat spray process.
 3/ Milk equivalent, fat basis. 4/ Ice cream, ice milk, & hard sherbet. 5/ Based on average milk price after adjustment for price support deductions. 6/ Estimated. P = preliminary. -- = not available.

Information contact: Jim Miller (202) 786-1770.

Table 15.—Wool

	Annual			1988		1989				
	1986	1987	1988	July	Feb	Mar	Apr	May	June	July P
U.S. wool price, 1/ (cts./lb.)	191	265	438	450	438	410	375	375	365	350
Imported wool price, 2/ (cts./lb.)	201	267	372	364	417	387	363	339	323	325
U.S. mill consumption, scoured										
Apparel wool (1,000 lb.)	126,768	129,677	117,069	9,077	11,074	13,718	10,400	8,700	11,908	9,669
Carpet wool (1,000 lb.)	9,960	13,092	15,633	1,073	1,314	1,559	1,595	1,362	1,517	1,155

1/ Wool price delivered at U.S. mills, clean basis, Graded Territory 64's (20.60-22.04 microns) staple 2-3/4" & up.
 2/ Wool price, Charleston, SC warehouse, clean basis, Australian 60/62's, type 64A (24 micron). Duty since 1982 has been 10.0 cents. P = preliminary.

Information contact: John Lawler (202) 786-1840.

Table 16.—Meat Animals

	Annual			1988						
	1986	1987	1988	July	Feb	Mar	Apr	May	June	July
Cattle on feed (7 States)										
Number on feed (1,000 head) 1/	7,920	7,643	8,066	7,431	7,700	7,661	8,012	7,847	7,555	7,010
Placed on feed (1,000 head)	20,035	21,040	20,584	1,246	1,585	1,975	1,534	1,619	1,268	1,311
Marketings (1,000 head)	19,263	19,410	19,698	1,760	1,509	1,549	1,570	1,747	1,751	1,690
Other disappearance (1,000 head)	1,049	1,207	1,187	62	115	75	129	164	62	63
Beef steer-corn price ratio,										
Omaha 2/	31.0	41.0	31.5	24.5	28.7	29.4	30.2	29.4	28.9	29.6
Hog-corn price ratio, Omaha 2/	27.8	32.8	19.6	16.8	16.3	15.4	14.8	16.8	18.5	19.6
Market prices (\$/cwt)										
Slaughter cattle										
Choice steers, Omaha	57.75	64.60	69.54	65.96	72.92	75.75	75.31	74.52	71.71	70.74
Utility cows, Omaha	37.19	44.83	46.55	45.39	46.92	45.89	45.19	45.57	48.56	49.12
Choice vealers, S. St. Paul-3/	59.92	78.74	90.23	77.50	225.06	257.50	266.25	260.05	258.44	246.88
Feeder cattle										
Choice, Kansas City, 600-700 lb.	62.79	75.36	83.67	79.08	85.56	84.45	82.63	83.50	85.38	87.13
Slaughter hogs										
Barrows & gilts, 7-markets	51.19	51.69	43.39	45.57	40.91	39.85	37.06	42.37	46.10	47.06
Feeder pigs										
S. Mo. 40-50 lb. (per head)	45.62	46.69	38.88	25.57	34.18	39.55	34.74	34.24	28.85	24.25
Slaughter sheep & lambs										
Lambs, Choice, San Angelo	69.46	78.09	68.84	59.00	68.83	70.90	78.17	73.56	72.63	69.50
Ewes, Good, San Angelo	34.78	38.62	38.88	37.83	53.28	47.55	42.45	38.95	37.10	31.92
Feeder lambs										
Choice, San Angelo	73.14	102.26	90.91	79.67	97.17	95.30	88.06	78.18	75.94	74.08
Wholesale meat prices, Midwest										
Choice steer beef, 600-700 lb.	88.98	97.21	103.34	97.09	107.98	112.43	113.84	112.62	106.35	104.91
Canter & cutter cow beef	71.31	83.70	87.77	85.74	96.93	92.17	89.77	89.74	93.83	95.24
Pork loins, 14-18 lb. 4/	104.78	106.23	97.49	104.96	90.97	91.77	91.59	99.95	108.28	115.10
Pork bellies, 12-14 lb.	65.82	63.11	41.25	40.84	31.41	30.91	25.49	29.11	32.90	31.52
Hams, skinned, 14-17 lb.	80.01	80.96	71.03	65.90	67.11	63.00	61.60	63.30	64.00	64.23
All fresh beef retail price 5/	--	212.64	224.35	226.07	233.94	238.50	237.33	238.31	236.47	237.50.
Commercial slaughter (1,000 head)*										
Cattle	37,288	35,647	35,072	2,983	2,568	2,822	2,644	3,024	3,025	2,794
Steers	17,516	17,443	17,341	1,494	1,261	1,400	1,336	1,521	1,506	1,385
Heifers	11,097	10,906	10,755	927	808	840	763	907	952	903
Cows	7,961	6,610	6,334	512	457	532	493	540	508	452
Bulls & stags	714	689	642	49	42	50	52	56	59	54
Calves	3,408	2,815	2,504	215	181	200	158	163	167	174
Sheep & lambs	5,635	5,199	5,293	405	425	519	409	447	437	413
Hogs	79,598	81,081	87,738	6,366	6,791	7,763	7,380	7,480	7,079	6,295
Commercial production (mil. lb.)										
Beef	24,213	23,405	23,419	1,982	1,744	1,889	1,757	1,998	2,022	1,889
Veal	509	416	387	34	28	31	27	29	29	27
Lamb & mutton	331	309	329	27	27	33	26	28	26	25
Pork	13,998	14,312	15,614	1,133	1,204	1,373	1,321	1,341	1,266	1,107
	Annual			1988				1989		
	1986	1987	1988	I	II	III	IV	I	II	III
Cattle on feed (13 States)										
Number on feed (1,000 head) 1/	9,754	9,245	9,769	9,769	9,385	9,001	8,591	9,408	9,678	8,455
Placed on feed (1,000 head)	23,583	24,894	24,353	5,824	5,893	5,986	6,650	6,212	5,177	--
Marketings (1,000 head)	22,856	22,991	23,339	5,823	5,859	6,171	5,486	5,598	5,985	7/6,038
Other disappearance (1,000 head)	1,236	1,379	1,375	385	418	225	347	344	415	--
Hogs & pigs (10 States) 6/										
Inventory (1,000 head) 1/	41,100	39,690	42,995	42,995	41,345	44,065	45,000	43,210	41,605	43,690
Breeding (1,000 head) 1/	5,258	5,110	5,510	5,510	5,520	5,630	5,460	5,335	5,420	5,560
Market (1,000 head) 1/	35,842	34,580	37,485	37,485	35,825	38,435	39,540	37,875	36,185	38,130
Farrowings (1,000 head)	8,223	8,838	9,316	2,123	2,578	2,359	2,261	2,109	2,535	7/2,359
Pig crop (1,000 head)	63,835	68,888	71,848	16,489	20,175	18,007	17,216	16,439	19,900	--

1/ Beginning of period. 2/ Bushels of corn equal in value to 100 pounds live weight. 3/ Per head starting September 1988. 4/ Prior to 1984, 8-14 lb.; 1984 & 1985, 14-17 lb.; beginning 1986, 14-18 lb. 5/ New series estimating the composite price of all beef grades & ground beef sold by retail stores. This new series is in addition to, but does not replace, the series for the retail price of Choice beef that appears in table 8. 6/ Quarters are Dec. of preceding year-Feb. (I), Mar.-May (II), June-Aug. (III), and Sept.-Nov. (IV). 7/ Intentions. *Classes estimated. -- = not available.

Information contacts: Ron Gustafson or Leland Southard (202) 786-1285.

Crops & Products

Table 17.—Supply & Utilization^{1,2}

	Area						Feed and residual	Other domestic use	Exports	Total use	Ending stocks	Farm price
	Set aside 3/	Planted	Harvested	Yield	Production	Total supply 4/						5/
	Mil. acres		Bu./acre									\$/bu.
Wheat												
1984/85	18.3	79.2	66.9	38.8	2,595	4,003	405	749	1,424	2,578	1,425	3.39
1985/86	18.8	75.6	64.7	37.5	2,425	3,866	279	767	1,915	1,961	1,905	3.08
1986/87	21.0	72.1	60.7	36.4	2,092	4,018	413	780	1,004	2,197	1,821	2.42
1987/88	23.9	65.8	56.0	37.7	2,107	3,945	281	811	1,592	2,684	1,261	2.57
1988/89*	22.5	65.5	53.2	34.1	1,811	3,096	155	823	1,425	2,403	694	3.72
1989/90*	9.5	76.8	62.7	32.9	2,064	2,779	175	835	1,275	2,285	494	3.85-4.20
Rice												
	Mil. acres		Lb./acre					Mil. cwt (rough equiv.)				\$/cwt
1984/85	.79	2.83	2.80	4,954	138.8	187.3	--	6/60.5	62.1	122.6	64.7	8.04
1985/86	1.24	2.51	2.49	5,414	134.9	201.8	--	6/65.8	58.7	124.5	77.3	6.53
1986/87	1.48	2.38	2.36	5,651	133.4	213.3	--	6/77.7	84.2	161.9	51.4	3.75
1987/88	1.57	2.36	2.33	5,555	129.6	184.0	--	6/80.4	72.2	152.6	31.4	7.27
1988/89*	1.09	2.93	2.90	5,511	159.5	194.9	--	6/81.0	87.0	168.0	26.9	6.50-7.00
1989/90*	1.16	2.77	2.75	5,548	152.3	184.3	--	6/84.1	78.0	162.1	22.2	7.00-9.00
Corn												
	Mil. acres		Bu./acre					Mil. bu.				\$/bu.
1984/85	3.9	80.5	71.9	106.7	7,674	8,684	4,079	1,091	1,865	7,036	1,648	2.63
1985/86	5.4	83.4	75.2	118.0	8,877	10,536	4,095	1,160	1,241	6,496	4,040	2.23
1986/87	14.3	78.7	69.2	119.3	8,250	12,291	4,714	1,192	1,504	7,410	4,882	1.50
1987/88	23.0	65.7	59.2	119.4	7,072	11,958	4,738	1,229	1,732	7,699	4,259	1.94
1988/89*	20.5	67.6	58.2	84.6	4,921	9,185	4,000	1,255	2,075	7,330	1,855	2.55
1989/90*	10.0	72.3	65.2	112.4	7,321	9,179	4,200	1,300	2,000	7,500	1,679	1.85-2.25
Sorghum												
	Mil. acres		Bu./acre					Mil. bu.				\$/bu.
1984/85	.6	17.3	15.4	56.4	866	1,154	539	18	297	854	300	2.32
1985/86	.9	18.3	16.8	66.8	1,120	1,420	664	28	178	869	551	1.93
1986/87	3.0	15.3	13.9	67.7	938	1,489	535	12	198	746	743	1.37
1987/88	4.1	11.8	10.6	69.7	739	1,483	564	25	231	820	663	1.70
1988/89*	3.9	10.4	9.1	63.8	578	1,240	475	25	315	815	425	2.30
1989/90*	2.8	11.9	10.5	62.6	659	1,084	500	15	250	765	319	1.65-2.05
Barley												
	Mil. acres		Bu./acre					Mil. bu.				\$/bu.
1984/85	.5	12.0	11.2	53.4	599	799	304	170	77	551	247	2.29
1985/86	.7	13.2	11.6	51.0	591	848	333	169	22	523	325	1.98
1986/87	2.1	13.1	12.0	50.8	611	944	298	174	137	608	336	1.61
1987/88	2.9	11.0	10.1	52.7	530	879	258	174	126	558	321	1.81
1988/89*	2.5	9.7	7.5	38.6	291	624	162	180	85	427	197	2.79
1989/90*	2.1	9.3	8.6	46.9	401	613	190	180	60	430	183	2.05-2.45
Oats												
	Mil. acres		Bu./acre					Mil. bu.				\$/bu.
1984/85	.1	12.4	8.2	58.0	474	689	433	74	1	509	180	1.67
1985/86	.1	13.3	8.2	63.7	521	728	460	82	2	544	184	1.23
1986/87	.6	14.7	6.9	56.3	386	603	395	73	3	471	133	1.21
1987/88	.8	18.0	6.9	54.0	374	553	361	79	1	441	112	1.56
1988/89*	.3	13.9	5.6	39.1	219	399	200	100	1	301	98	2.61
1989/90*	.3	12.1	7.3	52.3	381	529	300	110	2	412	117	1.45-1.85
Soybeans												
	Mil. acres		Bu./acre					Mil. bu.				\$/bu.
1984/85	0	67.8	66.1	28.1	1,861	2,037	7/93	1,030	598	1,721	316	5.84
1985/86	0	63.1	61.6	34.1	2,099	2,415	7/86	1,053	740	1,879	536	5.05
1986/87	0	60.4	58.3	33.3	1,940	2,476	7/104	1,179	757	2,040	436	2.78
1987/88	0	58.0	57.0	33.7	1,923	2,359	7/81	1,174	802	2,057	302	5.88
1988/89*	0	58.9	57.4	26.8	1,539	1,841	7/96	1,060	530	1,686	155	7.35
1989/90*	0	60.5	59.1	32.0	1,889	2,044	7/94	1,100	575	1,769	275	4.75-6.25
Soybean oil												
								Mil. lbs.				8/ Cts./lb.
1984/85	--	--	--	--	11,468	12,209	--	9,917	1,660	11,577	632	29.50
1985/86	--	--	--	--	11,617	12,257	--	10,053	1,257	11,310	947	18.00
1986/87	--	--	--	--	12,783	13,745	--	10,833	1,187	12,020	1,725	15.40
1987/88	--	--	--	--	9/ 12,974	14,895	--	10,930	1,873	12,803	2,092	22.65
1988/89*	--	--	--	--	9/ 11,753	13,995	--	10,450	1,425	11,875	2,120	21.00
1989/90*	--	--	--	--	12,210	14,360	--	11,000	1,400	12,400	1,960	18.0-22.0
Soybean meal												
								1,000 tons				10/ \$/ton
1984/85	--	--	--	--	24,529	24,784	--	19,480	4,917	24,397	387	125
1985/86	--	--	--	--	24,951	25,338	--	19,090	6,036	25,126	212	155
1986/87	--	--	--	--	27,758	27,970	--	20,387	7,343	27,730	240	163
1987/88	--	--	--	--	28,060	28,300	--	21,293	6,854	28,147	153	222
1988/89*	--	--	--	--	24,997	25,150	--	19,750	5,100	24,850	300	233
1989/90*	--	--	--	--	26,100	26,400	--	21,000	5,100	26,100	300	155-185

See footnotes at end of table.

Table 17.—Supply & Utilization, continued

	Area			Yield	Production	Total supply	Feed and residual	Other domestic use	Exports	Total use	Ending stocks	Farm price
	Set aside 3/	Planted	Harvested									
	Mil. acres		Lb./acre		Mil. bales		Cts./lb.					
Cotton 11/												
1984/85	2.5	11.1	10.4	600	13.0	15.8	--	5.5	6.2	11.8	4.1	58.70
1985/86	3.6	10.7	10.2	630	13.4	17.6	--	6.4	2.0	8.4	9.4	56.50
1986/87	4.2	10.0	8.5	552	9.7	19.1	--	7.4	6.7	14.1	5.0	52.40
1987/88	4.0	10.4	10.0	706	14.8	19.8	--	7.6	6.6	14.2	5.8	64.30
1988/89*	2.2	12.5	11.9	619	15.4	21.2	--	7.6	6.3	13.8	7.1	55.50
1989/90*	3.5	10.5	9.5	618	12.3	19.4	--	7.7	7.8	15.5	3.9	--

*September 12, 1989 Supply and Demand Estimates. 1/ Marketing year beginning June 1 for wheat, barley, & oats, August 1 for cotton & rice, September 1 for soybeans, corn, & sorghum, October 1 for soybean & soybean oil. 2/ Conversion factors: Hectare (ha.) = 2.471 acres, 1 metric ton = 2204.622 pounds, 36.7437 bushels of wheat or soybeans, 39.3679 bushels of corn or sorghum, 45.9296 bushels of barley, 68.8944 bushels of oats, 22.046 cwt of rice, and 4.59 480-pound bales of cotton. 3/ Includes diversion, PIK, acreage reduction, 50-92, & 0-92 programs. 4/ Includes imports. 5/ Market average prices do not include an allowance for loans outstanding & government purchases. 6/ Residual included in domestic use. 7/ Includes seed. 8/ Average of crude soybean oil, Decatur. 9/ Includes 196 million pounds in imports for 1987/88 & 300 million in 1988/89. 10/ Average of 44 percent, Decatur. 11/ Upland & extra long staple. Stock estimates based on Census Bureau data, resulting in an unaccounted difference between supply & use estimates & changes in ending stocks. -- = not available.

Information contact: Commodity Economics Division, Crops Branch (202) 786-1840.

Table 18.—Food Grains

	Marketing year 1/				1988	1989				
	1984/85	1985/86	1986/87	1987/88	July	Mar	Apr	May	June	July
Wholesale prices										
Wheat, No. 1 HRW, Kansas City (\$/bu.) 2/	3.74	3.28	2.72	2.96	3.77	4.32	4.46	4.55	4.41	4.28
Wheat, DNS, Minneapolis (\$/bu.) 2/	3.70	3.25	2.62	2.92	3.96	4.46	4.45	4.50	4.29	4.21
Rice, S.W. La. (\$/cwt) 3/	17.98	16.11	10.25	19.25	17.90	13.80	13.50	15.40	15.50	15.60
Wheat										
Exports (mil. bu.)	1,424	915	1,004	1,592	120	149	122	97	92	--
Mill grind (mil. bu.)	676	703	755	753	63	59	59	63	59	--
Wheat flour production (mil. cwt)	301	314	335	336	28	26	27	28	26	--
Rice										
Exports (mil. cwt, rough equiv.)	62.1	58.7	84.2	72.2	5.3	10.0	6.5	11.6	5.0	4.0

	Marketing year 1/			1987	1988			1989		
	1985/86	1986/87	1987/88	Sept-Nov	Dec-Feb	Mar-May	Jun-Aug	Sept-Nov	Dec-Feb	Mar-May
Wheat										
Stocks, beginning (mil. bu.)	1,425	1,905	1,821	2,976.5	2,500.6	1,923.5	1,260.8	2,253.6	1,709.9	1,221.7
Domestic use										
Food (mil. bu.)	674	696	726	193.1	170.8	181.6	181.4	196.4	172.9	168.8
Seed, feed & residual (mil. bu.) 4/	372	497	366	-20.1	-4.2	24.0	282.4	23.6	-43.0	-4.0
Exports (mil. bu.)	915	1,004	1,592	308.5	413.1	460.6	363.4	330.1	363.0	368.1

1/ Beginning June 1 for wheat & August 1 for rice. 2/ Ordinary protein. 3/ Long grain, milled basis. 4/ Residual includes feed use. -- = not available.

Information contacts: Ed Allen & Janet Livezey (202) 786-1840.

Table 19.—Cotton

	Marketing year 1/				1988	1989				
	1984/85	1985/86	1986/87	1987/88	July	Mar	Apr	May	June	July
U.S. price, SLM, 1-1/16 in. (cts./lb.) 2/	60.5	60.0	53.2	63.1	57.1	57.6	61.4	63.7	64.1	67.5
Northern Europe prices Index (cts./lb.) 3/	69.2	48.9	62.0	72.7	61.5	66.0	73.8	77.3	78.8	83.0
U.S. M 1-3/32 in. (cts./lb.) 4/	73.9	64.8	61.8	76.3	68.2	70.0	74.1	76.9	77.9	77.2
U.S. mill consumpt. (1,000 bales)	5,545	6,399	7,452	7,617	477	706	636	755	716	534
Exports (thou bales)	6,201	1,969	6,684	6,582	320	629	627	682	568	668
Stocks, beginning (1,000 bales)	2,775	4,102	9,348	5,026	5,771	13,947	12,613	11,350	9,913	8,651

1/ Beginning August 1. 2/ Average spot market. 3/ Liverpool Outlook (A) index; average of five lowest priced of 11 selected growths. 4/ Memphis territory growths.

Information contact: Bob Skinner (202) 786-1840.

Table 20.—Feed Grains

	Marketing year 1/				1988	1989				
	1984/85	1985/86	1986/87	1987/88	July	Mar	Apr	May	June	July
Wholesale prices										
Corn, no. 2 yellow, Chicago (\$/bu.)	2.79	2.35	1.64	2.14	2.93	2.78	2.72	2.77	2.66	2.50
Sorghum, no. 2 yellow, Kansas City (\$/cwt)	4.46	3.72	2.73	3.40	4.79	4.32	4.17	4.29	4.15	3.96
Barley, feed, Duluth (\$/bu.) 2/	2.09	1.53	1.44	1.78	2.31	2.49	2.52	2.41	2.12	2.22
Barley, malting, Minneapolis (\$/bu.)	2.55	2.24	1.89	2.04	3.87	4.33	4.29	3.84	3.02	3.33
Exports 3/										
Corn (mil. bu.)	1,865	1,241	1,504	1,735	126.5	206.6	180.9	212.8	225.4	--
Feed grains (mil. metric tons) 4/	56.6	36.6	46.3	52.9	4.0	6.0	5.5	6.1	6.5	--
	Marketing year 1/				1988	1989				
	1984/85	1985/86	1986/87	1987/88	Mar-May	Jun-Aug	Sept-Nov	Dec-Feb	Mar-May	June-Aug
Corn										
Stocks, beginning (mil. bu.)	1,006	1,648	4,040	4,882	7,635	5,836	4,259	7,072	5,204	3,419
Domestic use										
Feed (mil. bu.)	4,079	4,095	4,714	4,746	960	839	1,338	1,077	848	--
Food, seed, ind. (mil. bu.)	1,091	1,160	1,192	1,224	315	323	294	284	339	--
Exports (mil. bu.)	1,865	1,241	1,504	1,720	514	414	482	510	600	--
Total use (mil. bu.)	7,036	6,496	7,410	7,690	1,804	1,577	2,109	1,869	1,787	--

1/ September 1 for corn & sorghum; June 1 for oats & barley. 2/ Beginning March 1987 reporting point changed from Minneapolis to Duluth. 3/ Includes products. 4/ Aggregated data for corn, sorghum, oats, & barley. -- not available.

Information contact: Joy Harwood (202) 786-1840.

Table 21.—Fats & Oils

	Marketing year *				1988	1989				
	1984/85	1985/86	1986/87	1987/88	June	Feb	Mar	Apr	May	June
Soybeans										
Wholesale price, no. 1 yellow, Chicago (\$/bu.)	5.88	5.20	5.03	6.67	9.11	7.45	7.62	7.25	7.30	7.17
Crushings (mil. bu.)	1,030.5	1,052.8	1,178.8	1,174.5	89.2	85.8	93.5	89.6	87.0	76.0
Exports (mil. bu.)	598.2	740.7	756.9	801.6	29.3	56.8	67.9	41.4	23.6	31.6
Stocks, beginning (mil. bu.)	175.7	316.0	536.0	436.0	95.4	131.9	112.0	99.2	72.8	52.5
Soybean oil										
Wholesale price, crude, Decatur (cts./lb.)	29.52	18.02	15.36	22.92	27.68	21.21	22.11	21.97	22.23	20.82
Production (mil. lb.)	11,467.9	11,617.3	12,783.1	12,974.5	996.4	952.3	1,041.2	1,004.0	977.4	856.1
Domestic disap. (mil. lb.)	9,888.5	10,045.9	10,820.2	10,734.1	936.8	687.2	937.8	1,032.9	826.6	844.2
Exports (mil. lb.)	1,659.9	1,257.3	1,184.5	1,873.2	269.0	65.8	112.4	105.5	161.4	72.1
Stocks, beginning (mil. lb.)	720.5	632.5	946.6	1,725.0	2,570.4	2,703.2	2,902.4	2,893.4	2,759.0	2,743.2
Soybean meal										
Wholesale price, 44% protein, Decatur (\$/ton)	125.46	154.88	162.61	221.90	287.80	234.10	237.10	220.75	214.70	227.50
Production (1,000 ton)	24,529.3	24,951.3	27,758.8	28,060.2	2,129.0	2,036.3	2,218.8	2,126.6	2,061.2	1,802.9
Domestic disap. (1,000 ton)	19,481.3	19,117.2	20,387.4	21,275.9	1,723.4	1,570.8	1,615.8	1,456.7	1,565.1	1,664.6
Exports (1,000 ton)	4,916.5	6,009.3	7,343.0	6,871.0	366.8	512.1	760.9	610.9	532.4	180.8
Stocks, beginning (1,000 ton)	255.4	386.9	211.7	240.2	255.6	442.3	395.7	237.9	296.8	260.4
Margarine, wholesale price, Chicago, white (cts./lb.)										
	55.5	51.2	40.3	40.3	52.06	54.00	55.44	55.76	55.15	53.76

* Beginning September 1 for soybeans; October 1 for soybean meal & oil; calendar year for margarine.

Information contacts: Roger Hoskin (202) 786-1840, Tom Bickerton (202) 786-1824.

Table 22.—Farm Programs, Price Supports, Participation & Payment Rates

	Target price	Loan rate	Findley loan rate	Payment rates		Base acres 1/	Program 2/	Participation rate 3/
				Deficiency	Paid land diversion			
				-\$/bu.	Percent 4/	Mil. acres		Percent of base
Wheat								
1983/84	4.30	3.65		.65	2.70	95	15/5/10-30	78/78/51
1984/85	4.38	3.30		1.00	2.70	85	20/10/10-20	60/60/20
1985/86	4.38	3.30		1.08	2.70		20/10/0	73
1986/87 5/	4.38	3.00	2.40	1.98	2.00	1.10	22.5/2.5/5-10	85/85/21
1987/88	4.38	2.85	2.28	1.81			27.5/0/0	88
1988/89	4.23	2.76	2.21	.69			27.5/0/0	86
1989/90	4.10	2.58	2.06	7/ .20			10/0/0	77
1990/91	4.00	2.45	1.95				5/0/0	
Rice								
				\$/cwt				
1983/84	11.40	8.14		2.77	2.70	80	15/5/10-30	98/98/87
1984/85	11.90	8.00		3.76			25/0/0	85
1985/86	11.90	8.00	6/3.16	3.90	3.50		20/15/0	90
1986/87 5/	11.90	7.20	6/3.82	4.70			35/0/0	94
1987/88	11.66	6.84	6/5.77	4.82			35/0/0	96
1988/89	11.15	6.63	6/6.30	4.31			25/0/0	94
1989/90	10.80	6.50	6/6.50	3.00			25/0/0	94
Corn								
				\$/bu.				
1983/84	2.86	2.65		0	1.50	80	10/10/10-30	71/71/60
1984/85	3.03	2.55		.43			10/0/0	54
1985/86	3.03	2.55		.48			10/0/0	69
1986/87 5/	3.03	2.40	1.92	1.11	.73		17.5/2.5/0	86
1987/88	3.03	2.28	1.82	1.09	2.00		20/15/0	90
1988/89	2.93	2.21	1.77	7/ .36	1.75		20/10/0; 0/92	87
1989/90	2.84	2.06	1.65	7/ .89			10/0/0; 0/92	80
Sorghum								
				\$/bu.				
1983/84	2.72	2.52		0	1.50	80	8/ [same]	72/72/53
1984/85	2.88	2.42		.46				42
1985/86	2.88	2.42		.46				55
1986/87 5/	2.88	2.28	1.82	1.06	.65			75
1987/88	2.88	2.17	1.74	1.14	1.90			83/42
1988/89	2.78	2.10	1.68	.48	1.65			82
1989/90	2.70	1.96	1.57	7/ .95				76
Barley								
				\$/bu.				
1983/84	2.60	2.16		.21	1.00		8/ [same]	55/55/0
1984/85	2.60	2.08		.26				44
1985/86	2.60	2.08		.52				57
1986/87 5/	2.60	1.95	1.56	.99	.57			72
1987/88	2.60	1.86	1.49	.79	1.60			84
1988/89	2.51	1.80	1.44	0.00	1.40			79
1989/90	2.43	1.68	1.34	7/ .23				67
Oats								
				\$/bu.				
1983/84	1.60	1.36		.11	.75		8/ [same]	20/20/0
1984/85	1.60	1.31		0				14
1985/86	1.60	1.31		.29				14
1986/87 5/	1.60	1.23	.99	.39	.36			37
1987/88	1.60	1.17	.94	.20	.80			45
1988/89	1.55	1.13	.90	11/ 0.00			5/0/0; 0/92	30
1989/90	1.50	1.06	.85	0.00			5/0/0; 0/92	23
Soybeans 9/								
				\$/bu.				
1983/84		5.02						
1984/85		5.02						
1985/86		5.02						
1986/87 5/		4.77						
1987/88		4.77						
1988/89		4.77						
1989/90 10/		4.53						
Upland cotton								
				Cts./lb.				
1983/84	76.0	55.00		12.10	25.00	.85	20/5/10-30	93/93/77
1984/85	81.0	55.00		18.60			25/0/0	70
1985/86	81.0	57.30		23.70	30.00		20/10/0	82/0/0
1986/87 5/	81.0	55.00	11/44.00	26.00			25/0/0	93
1987/88	79.4	52.25	12/	17.3			25/0/0	92
1988/89	75.9	51.80		19.4			12.5/0/0	89
1989/90	73.4	50.00		9.90			25/0/0	89

1/ Includes planted area plus acres considered planted (ARP, PLD, 0-92 etc). Net of CRP. Revised April 1989. 2/ Percentage of base acres that farmers participating in Acreage Reduction Programs/Paid Land Diversion/PIK were required to devote to conserving uses to receive program benefits. In addition to the percentages shown for 1983/84, farmers had the option of submitting bids to retire their entire base acreages. 3/ Percentage of base acres enrolled in Acreage Reduction Programs/Paid Land Diversion/PIK. 4/ Percent of program yield, except 1986/87 wheat, which is dollars per bushel. 1983 & 1984 PIK rates apply only to the 10-30 and 10-20 portions, respectively. 5/ Rates for payments received in cash were reduced by 4.3 percent in 1986/87 due to Gramm-Rudman-Hollings. 6/ Annual average world market price. 7/ Guaranteed to farmers signed up for 0/92. 8/ The sorghum, oats, & barley programs were the same as for corn each year except 1983/84, when PIK was not offered on barley & oats, & in 1988 for oats. 9/ There are no target prices, acreage programs, or payment rates for soybeans. 10/ Loan rate is not to be announced prior to August 1, 1989. 11/ Loan repayment rate. 12/ Loans may be repaid at the lower of the loan rate or world market prices.

Information contact: Joy Harwood (202) 786-1840.

Table 23.—Fruit¹

	1980	1981	1982	1983	1984	1985	1986	1987	1988			
Citrus 1/ Production (1,000 tons)	16,484	15,105	12,057	13,608	10,792	10,525	11,051	11,968	12,728			
Per capita consumpt. (lbs.) 2/	112.5	104.4	109.3	120.0	102.8	109.1	117.3	112.8	113.6			
Noncitrus 3/ Production (1,000 tons)	15,504	13,332	14,659	14,154	14,291	14,189	13,918	16,010	15,842			
Per capita consumpt. (lbs.) 2/	87.6	88.0	89.2	88.7	93.9	91.8	96.4	101.5	97.7			
	1988					1989						
	Aug	Sept	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	June	July
F.o.b. shipping point prices												
Apples (\$/carton) 4/	23.05	20.45	13.80	12.15	12.63	10.78	13.94	12.32	11.25	9.41	7.86	9.55
Pears (\$/box) 5/	--	--	--	12.48	12.33	9.70	10.58	10.75	9.73	13.67	14.38	--
Oranges (\$/box) 6/	4.90	4.17	5.48	5.82	6.50	6.20	6.21	5.27	6.64	8.52	8.10	5.04
Grapefruit (\$/box) 6/	4.09	7.34	7.57	4.77	4.71	3.72	3.34	3.36	3.28	4.05	4.85	4.62
Stocks, ending												
Fresh apples (mil. lbs.)	5.1	1,857.7	4,601.8	3,904.3	3,265.8	2,659.6	2,094.6	1,544.2	1,069.1	619.3	347.3	174.9
Fresh pears (mil. lbs.)	117.6	434.0	425.7	368.3	295.5	234.6	162.9	115.1	57.7	26.6	6.4	11.0
Frozen fruits (mil. lbs.)	981.4	997.5	1,116.0	1,011.8	937.3	834.5	759.3	671.4	601.7	574.3	621.4	730.8
Frozen orange Juice (mil. lbs.)	862.5	693.1	639.7	587.7	721.6	980.9	1,151.1	1,086.8	1,204.2	1,296.1	1,296.9	1,151.5

1/ Crop year beginning with year indicated. 2/ Per capita consumption for total U.S. population, including military consumption of both fresh and processed fruit in fresh weight equivalent. 3/ Calendar year. 4/ Red delicious, Washington, extra fancy, carton tray pack, 125's. 5/ D'Anjou, Washington, standard box wrapped, U.S. no. 1, 135's. 6/ U.S. equivalent on-tree returns. -- = not available.

Information contact: Wynne Happer (202) 786-1885.

Table 24.—Vegetables

		Calendar Year												
		1979	1980	1981	1982	1983	1984	1985	1986	1987	1988			
Production														
Total vegetables (1,000 cwt)	1/	413,925	381,370	379,123	431,515	403,320	457,392	453,769	445,436	464,141	452,731			
Fresh (1,000 cwt)	1/ 2/	190,859	190,228	194,694	207,924	197,919	217,132	217,932	216,267	219,689	225,784			
Processed (tons)	3/	11,153,300	9,557,100	9,221,460	11,179,590	10,270,050	12,013,020	11,791,860	11,616,560	12,222,620	11,347,370			
Mushrooms (1,000 lbs.)		470,069	469,576	517,146	490,826	561,531	595,681	587,956	614,393	631,819	667,367			
Potatoes (1,000 cwt)		342,447	302,857	338,591	355,131	333,911	362,612	407,109	361,511	385,462	349,973			
Sweetpotatoes (1,000 cwt)		13,370	10,953	12,799	14,833	12,083	12,986	14,853	12,674	12,064	11,832			
Dry edible beans (1,000 cwt)		20,552	26,729	32,751	25,563	15,520	21,070	22,175	22,886	25,909	19,230			
1988														
1989														
		July	Aug	Sept	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	June	July
Shipments														
Fresh (1,000 cwt)	4/	21,631	21,791	15,215	16,475	20,999	16,535	18,041	18,754	24,944	20,887	35,676	31,223	21,599
Potatoes (1,000 cwt)		7,461	10,014	9,963	9,958	13,948	11,092	11,137	10,497	14,733	13,005	15,768	9,991	8,466
Sweetpotatoes (1,000 cwt)		91	212	262	305	876	460	246	278	441	229	190	20	19

1/ 1983 data are not comparable with 1984 & 1985. 2/ Estimate reinstated for asparagus with the 1984 crop; all other years also include broccoli, carrots, cauliflower, celery, sweet corn, lettuce, honeydews, onions, & tomatoes. 3/ Estimates reinstated for cucumbers with the 1984 crop; all other years also include snap beans, sweet corn, green peas, & tomatoes. 4/ Includes snap beans, broccoli, cabbage, carrots, cauliflower, celery, sweet corn, cucumbers, eggplant, lettuce, onions, bell peppers, squash, tomatoes, cantaloupes, honeydews, & watermelons. -- = not available.

Information contacts: Shannon Hamm or Cathy Greene (202) 786-1884.

Table 25.—Other Commodities

	Annual					1988			1989	
	1984	1985	1986	1987	1988	Apr-June	July-Sept	Oct-Dec	Jan-Mar	Apr-June
Sugar										
Production 1/	5,890	5,969	6,257	7,309	7,087	772	642	3,573	1,835	677
Deliveries 1/	8,454	8,035	7,786	8,167	8,188	1,983	2,147	2,107	1,902	3,958
Stocks, ending 1/	3,005	3,126	3,225	3,195	3,134	2,467	1,316	3,134	3,413	2,351
Coffee										
Composite green price N.Y. (cts./lb.)	142.95	137.46	185.18	109.14	115.59	121.44	114.20	120.75	126.67	118.01
Imports, green bean equiv. (mil. lbs.) 2/	2,411	2,550	2,596	2,638	2,072	422	594	472	586	535
	Annual				1988	1989				
	1986	1987	1988	May	Dec	Jan	Feb	Mar	Apr	May
Tobacco										
Prices at auctions 3/										
Flue-cured (\$/lb.)	1.52	1.59	1.61	--	--	--	--	--	--	--
Burley (\$/lb.)	1.60	1.56	1.61	--	1.62	1.60	1.54	--	--	--
Domestic consumption 4/										
Cigarettes (bil.)	584.0	575.0	562.5	51.6	39.5	46.9	41.9	51.7	44.4	52.9
Large cigars (mil.)	3,055	2,728	2,531	224.4	203.3	169.3	171.4	217.6	179.2	250.8

1/ 1,000 short tons, raw value. Quarterly data shown at end of each quarter. 2/ Net imports of green & processed coffee. 3/ Crop year July-June for flue-cured, Oct.-Sept. for burley. 4/ Taxable removals. -- = not available.

Information contacts: sugar, Peter Buzzanell (202) 786-1888, coffee, Fred Gray (202) 786-1888, tobacco, Verner Grise (202) 786-1890.

Table 26.—World Supply & Utilization of Major Crops, Livestock, & Products

	1983/84	1984/85	1985/86	1986/87	1987/88	1988/89 P	1989/90 F
	Million units						
Wheat							
Area (hectares)	228.9	231.2	229.6	228.2	219.9	218.2	226.6
Production (metric tons)	489.3	511.9	500.1	530.7	501.8	501.0	528.0
Exports (metric tons) 1/	102.0	107.0	85.0	90.7	104.7	97.7	98.3
Consumption (metric tons) 2/	474.0	493.0	496.2	522.4	531.6	531.5	536.5
Ending stocks (metric tons) 3/	145.1	164.0	167.9	176.1	146.3	115.9	107.3
Coarse grains							
Area (hectares)	335.0	334.6	341.3	337.3	323.2	327.3	328.1
Production (metric tons)	688.1	815.8	843.3	835.5	791.5	730.0	800.3
Exports (metric tons) 1/	93.4	100.4	83.2	84.1	83.4	97.2	96.9
Consumption (metric tons) 2/	759.3	782.6	779.0	809.6	811.9	801.3	815.4
Ending stocks (metric tons) 3/	110.7	143.9	208.1	234.0	213.6	142.4	127.2
Rice, milled							
Area (hectares)	144.1	144.1	144.6	145.1	140.6	145.0	145.5
Production (metric tons)	307.9	318.8	318.8	318.3	312.8	327.8	330.7
Exports (metric tons) 4/	12.4	11.4	12.6	13.0	11.9	14.3	13.1
Consumption (metric tons) 2/	304.5	310.6	319.3	323.2	319.0	325.5	331.1
Ending stocks (metric tons) 3/	46.6	54.9	54.7	50.2	44.0	46.3	45.9
Total grains							
Area (hectares)	708.0	709.9	715.5	710.6	683.7	690.5	700.2
Production (metric tons)	1,485.3	1,646.5	1,662.2	1,684.5	1,606.1	1,558.8	1,659.0
Exports (metric tons) 1/	207.8	218.8	180.8	187.8	200.0	209.2	208.3
Consumption (metric tons) 2/	1,537.8	1,586.2	1,594.5	1,655.2	1,662.5	1,658.3	1,683.0
Ending stocks (metric tons) 3/	302.4	362.8	430.7	460.3	403.9	304.6	280.4
Oilseeds							
Crush (metric tons)	135.8	150.7	155.0	161.4	166.8	165.7	173.1
Production (metric tons)	165.0	191.1	196.1	194.2	207.9	201.7	213.4
Exports (metric tons)	33.0	33.1	34.5	37.7	39.5	31.8	33.7
Ending stocks (metric tons)	15.7	21.1	26.8	23.5	23.8	21.2	21.7
Meals							
Production (metric tons)	92.5	101.8	105.0	110.4	114.3	112.1	117.8
Exports (metric tons)	29.7	32.3	34.4	36.7	36.3	36.4	39.1
Oils							
Production (metric tons)	42.1	46.2	49.3	50.3	52.7	53.3	55.8
Exports (metric tons)	13.7	15.6	16.4	16.9	17.6	17.5	18.3
Cotton							
Area (hectares)	31.0	33.9	31.9	29.9	31.1	34.0	32.9
Production (bales)	65.6	88.2	79.6	70.4	80.8	84.0	80.8
Exports (bales)	19.2	20.2	20.2	26.0	23.2	25.6	25.0
Consumption (bales)	68.3	70.0	75.8	82.5	83.9	83.8	85.3
Ending stocks (bales)	24.0	42.4	47.2	33.6	30.8	30.1	25.2
	1983	1984	1985	1986	1987	1988	1989 F
Red meat							
Production (metric tons)	97.5	99.6	103.5	106.4	108.8	109.9	110.6
Consumption (metric tons)	95.8	97.6	101.5	105.3	107.1	108.6	109.1
Exports (metric tons) 1/	5.9	5.9	6.2	6.6	6.6	6.7	7.0
Poultry							
Production (metric tons)	24.4	25.2	26.2	27.4	29.2	30.1	31.3
Consumption (metric tons)	24.3	24.8	26.0	27.0	28.8	29.7	30.8
Exports (metric tons) 1/	1.3	1.3	1.2	1.3	1.5	1.5	1.6
Dairy							
Milk production (metric tons)	413.0	413.5	419.1	427.0	427.0	430.5	433.1

1/ Excludes intra-EC trade. 2/ Where stocks data not available (excluding USSR), consumption includes stock changes. 3/ Stocks data are based on differing marketing years & do not represent levels at a given date. Data not available for all countries; includes estimated change in USSR grain stocks but not absolute level. 4/ Calendar year data. 1984 data correspond with 1983/84, etc. P = preliminary. F = forecast.

Information contacts: Frederic Surls (202) 786-1824; red meat & poultry, Linda Bailey (202) 786-1286; dairy, Sara Short (202) 786-1769.

U.S. Agricultural Trade

Table 27.—Prices of Principal U.S. Agricultural Trade Products

	Annual			1988		1989				
	1986	1987	1988	July	Feb	Mar	Apr	May	June	July
Export commodities										
Wheat, f.o.b. vessel, Gulf ports (\$/bu.)	3.19	3.11	3.97	4.10	4.70	4.88	4.79	4.82	4.62	4.57
Corn, f.o.b. vessel, Gulf ports (\$/bu.)	2.27	1.95	2.73	3.31	3.00	3.03	2.95	3.02	2.91	2.74
Grain sorghum, f.o.b. vessel, Gulf ports (\$/bu.)	2.16	1.88	2.52	3.02	2.81	2.83	2.76	2.84	2.67	2.60
Soybeans, f.o.b. vessel, Gulf ports (\$/bu.)	5.45	5.55	7.81	9.11	7.89	8.05	7.61	7.61	7.48	7.26
Soybean oil, Decatur (cts./lb.)	16.36	15.85	23.52	29.31	21.02	22.02	21.88	22.23	20.78	19.87
Soybean meal, Decatur (\$/ton)	157.62	175.57	234.75	257.53	234.18	235.70	220.90	215.09	227.36	230.23
Cotton, 8-market avg. spot (cts./lb.)	53.47	64.35	57.25	57.40	55.39	57.60	61.43	63.70	64.18	67.39
Tobacco, avg. price at auction (cts./lb.)	153.96	144.32	147.93	140.88	159.74	159.74	160.43	160.43	160.43	160.31
Rice, f.o.b. mill, Houston (\$/cwt)	14.60	13.15	19.60	20.50	15.00	15.00	15.00	15.00	15.50	16.50
Inedible tallow, Chicago (cts./lb.)	9.03	13.79	16.64	18.81	16.00	14.86	14.60	14.70	15.10	14.48
Import commodities										
Coffee, N.Y. spot (\$/lb.)	2.01	1.09	1.21	1.21	1.31	1.28	1.33	1.36	1.21	.88
Rubber, N.Y. spot (cts./lb.)	42.87	50.65	59.20	66.05	59.34	56.69	55.23	52.07	49.50	49.16
Cocoa beans, N.Y. (\$/lb.)	.88	.87	.69	.71	.68	.64	.58	.54	.54	.58

Information contact: Mary Teymourian (202) 786-1820.

Table 28.—Indexes of Real Trade-Weighted Dollar Exchange Rates ¹

	1988 (revised)				1989 (revised)							
	Sept	Oct	Nov	Dec	Jan	Feb	Mar P	Apr P	May P	June P	July P	Aug P
	1985 = 100											
Total U.S. trade 2/	70.8	68.9	66.3	66.3	68.6	69.3	70.2	70.4	73.2	74.7	71.8	72.4
Agricultural trade												
U.S. markets	79.3	77.8	75.7	75.6	77.2	77.5	79.5	79.2	81.1	82.2	80.6	81.3
U.S. competitors	84.4	83.5	82.1	81.9	82.1	82.0	82.4	82.5	83.7	83.9	84.7	85.2
Wheat												
U.S. markets	90.3	89.5	88.1	88.8	91.0	91.5	94.2	93.3	94.5	94.6	95.1	96.1
U.S. competitors	80.2	78.3	77.0	76.1	76.2	76.1	77.2	77.5	79.2	79.9	78.6	79.1
Soybeans												
U.S. markets	71.4	69.7	67.2	67.1	69.1	69.6	70.3	70.3	72.6	74.2	71.9	72.4
U.S. competitors	78.6	76.1	75.5	74.3	71.9	70.3	72.6	71.9	71.2	70.1	76.9	78.3
Corn												
U.S. markets	71.6	69.8	67.4	67.2	68.3	68.6	70.6	70.1	72.0	73.6	71.9	72.6
U.S. competitors	78.7	76.0	74.1	73.6	73.9	73.4	73.4	73.7	75.5	76.1	74.4	74.7
Cotton												
U.S. markets	76.8	75.3	73.1	72.9	74.2	74.4	75.0	74.8	76.1	77.2	75.9	76.2
U.S. competitors	84.7	84.0	82.5	82.5	82.4	81.5	83.7	82.1	83.9	83.8	83.9	84.3

^{1/} Real indexes adjust nominal exchange rates for differences in rates of inflation, to avoid the distortion caused by high-inflation countries. A higher value means the dollar has appreciated. See the October 1988 issue of *Agricultural Outlook* for a discussion of the calculations and the weights used. ^{2/} Federal Reserve Board index of trade-weighted value of the U.S. dollar against 10 major currencies. Weights are based on relative importance in world financial markets. P = preliminary. R = revised

Information contact: Tim Baxter, David Stallings (202) 786-1706.

Table 29.—Trade Balance

	Fiscal year 1/									June
	1981	1982	1983	1984	1985	1986	1987	1988	1989 F	1989
	\$ million									
Exports										
Agricultural	43,783	39,097	34,769	38,027	31,201	26,312	27,876	35,334	39,000	3,057
Nonagricultural	185,420	176,308	159,373	170,014	179,236	179,291	202,911	258,638	--	26,854
Total 2/	229,203	215,405	194,142	208,041	210,437	205,603	230,787	293,972	--	29,911
Imports										
Agricultural	17,218	15,485	16,373	18,916	19,740	20,884	20,650	21,011	21,000	1,720
Nonagricultural	237,469	233,349	230,527	297,736	313,722	342,846	367,374	409,141	--	38,268
Total 3/	254,687	248,834	246,900	316,652	333,462	363,730	388,024	430,152	--	39,988
Trade balance										
Agricultural	26,565	23,612	18,396	19,111	11,461	5,428	7,226	14,323	18,000	1,337
Nonagricultural	-52,049	-57,041	-71,154	-127,722	-134,486	-163,555	-164,463	-150,503	--	-11,414
Total	-25,484	-33,429	-52,758	-108,611	-123,025	-158,127	-157,237	-136,180	--	-10,077

^{1/} Fiscal years begin October 1 & end September 30. Fiscal year 1988 began Oct. 1, 1987 & ended Sept. 30, 1988.

^{2/} Domestic exports including Department of Defense shipments (F.A.S. value). ^{3/} Imports for consumption (customs value). F = forecast. -- = not available.

Information contact: Stephen MacDonald (202) 786-1822.

Table 30.—U.S. Agricultural Exports & Imports

	Fiscal year*				June	Fiscal year*				June
	1986	1987	1988	1989 F	1989	1986	1987	1988	1989 F	1989
	1,000 units					\$ million				
EXPORTS										
Animals, live (no.) 1/	570	275	1,082	--	71	344	331	452	--	16
Meats & preps., excl. poultry (mt)	451	548	631	2/600	86	1,012	1,300	1,797	--	207
Dairy products (mt)	480	445	388	--	58	431	491	536	500	43
Poultry meats (mt)	265	376	390	400	44	282	406	424	--	48
Fats, oils, & greases (mt)	1,355	1,220	1,362	3/1,400	107	477	417	545	--	40
Hides & skins incl. furskins	--	--	--	--	--	1,440	1,666	1,838	--	161
Cattle hides, whole (no.) 1/	25,596	24,333	23,282	--	2,454	1,131	1,254	1,457	--	126
Mink pelts (no.) 1/	2,697	2,760	2,455	--	316	65	103	88	--	8
Grains & feeds (mt)	74,358	90,211	108,905	--	10,189	9,472	9,059	12,581	4/16,300	1,450
Wheat (mt)	25,501	28,204	40,501	37,000	2,471	3,260	2,877	4,467	5/6,200	407
Wheat flour (mt)	1,094	1,305	1,046	1,300	18	203	207	171	--	4
Rice (mt)	2,382	2,454	2,173	2,400	201	648	551	731	800	66
Feed grains, incl. products (mt)	36,236	47,606	53,308	62,500	6,483	3,817	3,752	5,209	7,500	786
Feeds & fodders (mt)	8,392	10,113	11,233	6/11,000	955	1,286	1,455	1,719	--	153
Other grain products (mt)	1,015	755	908	--	88	332	285	361	--	46
Fruits, nuts, and preps. (mt)	2,003	2,146	2,409	--	206	1,766	2,050	2,368	--	190
Fruit juices incl.										
froz. (1,000 hectoliters) 1/	3,652	4,364	5,497	--	526	148	185	252	--	27
Vegetables & preps. (mt)	1,442	1,629	1,826	--	259	997	1,176	1,282	--	149
Tobacco, unmanufactured (mt)	224	224	229	200	12	1,318	1,203	1,296	1,300	68
Cotton, excl. lint (mt)	482	1,306	1,388	1,400	55	678	1,419	2,136	2,000	75
Seeds (mt)	269	305	286	--	18	367	371	415	400	19
Sugar, cane or beet (mt)	375	582	318	--	34	75	113	98	--	12
Oilseeds & products (mt)	27,583	29,725	29,471	--	1,173	6,271	6,308	7,700	6,800	371
Oilseeds (mt)	20,684	21,905	21,366	--	920	4,394	4,423	5,238	--	271
Soybeans (mt)	20,139	21,394	20,908	15,400	849	4,174	4,205	5,008	4,300	240
Protein meal (mt)	5,614	6,786	6,406	4,500	174	1,132	1,347	1,502	1,300	45
Vegetable oils (mt)	1,284	1,035	1,699	--	79	746	538	961	--	55
Essential oils (mt)	7	8	9	--	1	105	111	120	--	16
Other	568	565	668	--	36	1,129	1,273	1,495	--	166
Total	109,862	129,290	148,280	146,500	12,278	26,312	27,876	35,334	39,000	3,057
IMPORTS										
Animals, live (no.) 1/	1,885	1,994	2,238	--	163	637	610	729	700	53
Meats & preps., excl. poultry (mt)	1,139	1,282	1,280	--	94	2,248	2,797	2,788	--	215
Beef & veal (mt)	693	778	779	725	58	1,252	1,575	1,681	1,600	136
Pork (mt)	406	462	456	410	32	900	1,125	1,001	900	68
Dairy products (mt)	768	461	337	355	27	787	849	881	800	68
Poultry & products 1/	--	--	--	--	--	101	112	97	--	14
Fats, oils, & greases (mt)	22	21	20	--	1	17	18	19	--	1
Hides & skins, incl. furskins 1/	--	--	--	--	--	200	304	247	--	15
Wool, unmanufactured (mt)	53	60	56	--	5	160	201	292	--	21
Grains & feeds (mt)	2,299	2,336	3,050	3,300	251	670	727	868	1,000	89
Fruits, nuts, & preps., excl. juices (mt)	4,637	4,840	4,797	4,795	395	1,980	2,178	2,169	--	178
Bananas & plantains (mt)	3,042	3,106	3,030	2,950	264	744	817	820	800	73
Fruit juices (1,000 hectoliters) 1/	31,539	34,059	26,758	27,000	2,374	698	728	768	--	61
Vegetables & preps. (mt)	2,199	2,446	2,520	2,550	206	1,560	1,509	1,593	1,700	150
Tobacco, unmanufactured (mt)	208	225	217	200	11	606	634	611	500	35
Cotton, unmanufactured (mt)	41	38	36	--	1	14	7	9	--	7/
Seeds (mt)	89	133	143	170	3	111	156	153	200	7
Nursery stock & cut flowers 1/	--	--	--	--	--	352	369	419	--	27
Sugar, cane or beet (mt)	1,905	1,492	1,069	--	149	654	497	368	--	58
Oilseeds & products (mt)	1,515	1,572	1,772	1,865	178	641	579	838	900	91
Oilseeds (mt)	197	165	208	--	32	69	56	71	--	12
Protein meal (mt)	138	245	253	--	24	15	30	42	--	4
Vegetable oils (mt)	1,173	1,162	1,311	--	123	555	493	725	--	75
Beverages, excl. fruit juices (1,000 hectoliters) 1/	15,488	15,547	15,583	--	1,369	1,848	1,923	2,008	--	161
Coffee, tea, cocoa, spices (mt)	1,940	1,915	1,842	--	136	6,099	4,867	4,274	--	299
Coffee, incl. products (mt)	1,223	1,206	1,050	1,000	76	4,402	3,233	2,600	2,800	187
Cocoa beans & products (mt)	507	503	562	530	41	1,191	1,088	1,164	1,000	66
Rubber & allied gums (mt)	801	824	846	875	64	615	714	949	1,000	69
Other	--	--	--	--	--	886	871	931	--	107
Total	--	--	--	--	--	20,884	20,650	21,011	21,000	1,720

*Fiscal years begin Oct. 1 & end Sept. 30. Fiscal year 1988 began Oct. 1, 1987 & ended Sept. 30, 1988. 1/ not included in total volume. 2/ forecasts for footnoted items 2/-6/ are based on slightly different groups of commodities. Fiscal 1988 exports of categories used in the 1989 forecasts were 2/ 561,000 m. tons. 3/ 1.347 million dollars 4/ 12,743 million. 5/ 4,638 million, i.e. includes flour. 6/ 11.095 million m. tons. 7/ Less than \$500. F = forecast. -- = not available.

Information contact: Stephen MacDonald (202) 786-1822.

Table 31.—U.S. Agricultural Exports by Region

Region & country	Fiscal year*				June 1989	Change from year* earlier				June 1989
	1986	1987	1988	1989 F		1986	1987	1988	1989 F	
	\$ million					Percent				
Western Europe	6,851	7,219	8,029	7,400	367	-5	5	11	-7	-13
European Community (EC-12)	6,435	6,787	7,513	6,900	343	-3	5	11	-8	-13
Belgium-Luxembourg	361	423	429	--	22	-23	17	1	--	69
France	431	495	565	--	28	9	15	14	--	-45
Germany, Fed. Rep.	1,001	1,266	1,306	--	51	11	26	3	--	-23
Italy	686	733	713	--	40	1	6	-3	--	-9
Netherlands	2,042	1,954	2,087	--	73	6	-4	7	--	-16
United Kingdom	628	666	819	--	46	0	6	23	--	-34
Portugal	308	271	340	--	27	-39	-12	25	--	18
Spain, incl. Canary Islands	723	658	848	--	37	-13	-9	29	--	56
Other Western Europe	415	432	516	500	23	-19	4	20	0	-7
Switzerland	128	145	191	--	9	-45	13	32	--	-7
Eastern Europe	447	453	559	400	34	-16	1	23	-33	-21
German Dem. Rep.	52	66	67	--	7	-36	27	0	--	34
Poland	42	63	167	--	6	-66	50	165	--	20
Yugoslavia	134	131	104	--	1	-2	-2	-21	--	-92
Romania	112	115	93	--	4	27	3	-19	--	-75
USSR	1,105	659	1,934	3,500	356	-56	-40	193	84	300
Asia	10,494	11,990	15,928	18,800	1,485	-12	14	33	18	9
West Asia (Mideast)	1,243	1,664	1,903	2,200	155	-14	34	14	16	5
Turkey	111	117	120	--	17	-13	5	3	--	83
Iraq	335	528	735	900	53	-10	58	39	29	-17
Israel	255	244	334	--	29	-15	-4	37	--	-26
Saudi Arabia	335	489	464	400	30	-12	46	-5	-13	82
South Asia	517	345	805	--	60	-14	-33	133	--	-43
Bangladesh	94	111	107	--	28	-54	18	-3	--	2,700
India	90	93	354	--	21	-30	3	281	--	-57
Pakistan	285	98	276	500	2	25	-66	181	67	-96
China	83	235	613	1,500	66	-65	183	161	150	-5
Japan	5,139	5,554	7,274	8,100	671	-9	8	31	11	14
Southeast Asia	724	708	1,015	--	60	-14	-2	43	--	-18
Indonesia	172	152	238	--	12	-16	-12	56	--	14
Philippines	269	259	345	400	22	-6	-4	33	33	-41
Other East Asia	2,788	3,485	4,318	4,700	473	-11	25	24	9	25
Taiwan	1,109	1,354	1,577	1,600	154	-17	22	16	0	-1
Korea, Rep.	1,277	1,693	2,250	2,500	277	-9	33	33	11	52
Hong Kong	400	436	488	600	42	1	9	12	20	1
Africa	2,134	1,784	2,272	2,400	161	-16	-16	27	6	-29
North Africa	1,401	1,279	1,659	1,900	120	16	-9	30	12	-37
Morocco	159	196	193	--	12	2	23	-2	--	29
Algeria	329	244	537	700	42	50	-26	120	30	-24
Egypt	875	761	786	1,000	56	14	-13	3	25	-49
Sub-Sahara	733	505	613	500	41	-44	-31	21	-17	12
Nigeria	158	67	44	--	1	-57	-58	-35	--	-54
Rep. S. Africa	70	49	85	--	3	-63	-30	74	--	13
Latin America & Caribbean	3,598	3,765	4,401	5,100	397	-21	5	17	16	20
Brazil	445	418	176	100	21	-20	-6	-58	-50	493
Caribbean Islands	752	829	867	--	94	-2	10	5	--	37
Central America	334	377	413	--	23	-7	13	10	--	-28
Colombia	137	115	178	--	13	-42	-16	55	--	-8
Mexico	1,114	1,215	1,726	2,400	192	-29	9	42	41	28
Peru	108	140	174	--	8	2	30	24	--	26
Venezuela	493	459	597	600	29	-32	-7	30	0	-14
Canada	1,466	1,776	1,973	2,200	239	-15	21	11	10	39
Oceania	216	230	238	300	19	6	6	3	50	-28
Total	26,312	27,876	35,334	40,000	3,057	-16	6	27	13	14
Developed countries	13,957	15,031	17,883	18,400	1,322	-8	8	19	3	6
Less developed countries	10,720	11,498	14,346	16,100	1,279	-15	7	25	13	4
Centrally planned countries	1,636	1,347	3,106	5,500	455	-50	-18	131	77	126

*Fiscal years begin Oct. 1 & end Sept. 30. Fiscal year 1988 began Oct. 1, 1987 & ended Sept. 30, 1988. F = forecast.

-- = not available.

Note: Adjusted for transshipments through Canada.

Information contact: Stephen MacDonald (202) 786-1822.

Farm Income

Table 32.—Farm Income Statistics

	Calendar year										
	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989 F
	\$ billion										
1. Farm receipts	133.8	142.0	144.1	147.1	141.1	146.8	149.1	140.6	145.3	157.2	158 to 168
Crops (incl. net CCC loans)	62.3	71.7	72.5	72.3	67.1	69.5	74.3	64.0	63.8	72.6	75 to 79
Livestock	69.2	68.0	69.2	70.3	69.4	73.0	69.8	71.5	75.7	78.9	78 to 82
Farm related 1/	2.2	2.3	2.5	4.5	4.5	4.4	5.0	5.1	5.8	5.7	5 to 7
2. Direct Government payments	1.4	1.3	1.9	3.5	9.3	8.4	7.7	11.8	16.7	14.5	9 to 12
Cash payments	1.4	1.3	1.9	3.5	4.1	4.0	7.6	8.1	6.6	8.0	8 to 10
Value of PIK commodities	0.0	0.0	0.0	0.0	5.2	4.5	0.1	3.7	10.1	7.0	1 to 2
3. Total gross farm income (4+5+6) 2/	135.1	143.3	146.0	150.6	150.4	155.2	156.9	152.5	162.0	171.6	170 to 175
4. Gross cash income (1+2)	135.1	143.3	146.0	150.6	150.4	155.2	156.9	152.5	162.0	171.6	170 to 175
5. Nonmoney income 3/	10.6	12.3	13.8	14.3	13.5	13.4	11.8	10.6	10.0	10.3	8 to 10
6. Value of inventory change	5.0	-6.3	6.5	-1.4	-10.9	6.3	-2.4	-2.7	1.4	-4.3	4 to 7
7. Cash expenses 4/	101.7	109.1	113.2	112.8	113.5	116.6	110.2	100.7	104.3	111.7	116 to 120
8. Total expenses	123.3	133.1	139.4	140.0	140.4	142.7	134.0	122.4	124.5	132.0	136 to 140
9. Net cash income (4-7)	33.4	34.2	32.8	37.8	36.9	38.6	46.7	51.8	57.7	59.9	52 to 57
10. Net farm income (3-8)	27.4	16.1	26.9	23.5	12.7	32.2	32.4	38.0	47.1	45.7	48 to 53
Deflated (1982\$)	34.9	18.8	28.6	23.5	12.2	29.9	29.2	33.4	40.0	37.6	39 to 43
11. Off-farm income	33.8	34.7	35.8	36.4	37.0	38.9	42.6	44.6	46.8	51.7	51 to 55
12. Loan charges 5/: Real estate	13.0	9.9	9.1	3.8	2.3	-1.1	-6.0	-9.2	-7.7	-4.0	0 to 3
13. 5/: Non-real estate	11.2	5.3	6.5	3.4	0.9	-0.8	-9.6	-10.7	-4.9	1.0	0 to 2
14. Rental income plus monetary change	6.3	6.1	6.4	6.3	5.3	8.9	8.8	7.8	6.8	8.0	7 to 9
15. Capital expenditures 5/	20.1	18.0	16.8	13.3	12.7	12.5	9.2	8.5	9.8	10.2	10 to 12
16. Net cash flow (9+12+13+14-15)	43.8	37.6	37.8	38.1	32.7	33.1	30.7	31.2	42.1	52.7	48 to 58

1/ Income from machine hire, custom work, sales of forest products, & other miscellaneous cash sources. 2/ Numbers in parentheses indicate the combination of items required to calculate a given item. 3/ Value of home consumption of self-produced food & imputed gross rental value of farm dwellings. 4/ Excludes capital consumption, perquisites to hired labor, & farm household expenses. 5/ Excludes farm households. Totals may not add because of rounding. F = forecast.

Information contact: Andy Bernat (202) 786-1808.

Table 33.—Balance Sheet of the U.S. Farming Sector

	Calendar year 1/										
	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989 F
	\$ billion										
Assets											
Real estate	706.1	782.4	784.7	748.8	738.7	637.7	555.9	507.3	518.5	546.0	580 to 590
Non-real estate	201.6	213.2	212.0	212.2	205.6	209.0	190.5	182.2	187.8	202.5	196 to 202
Livestock & poultry	61.4	60.6	53.5	53.0	49.7	49.6	46.3	47.6	57.9	65.7	65 to 69
Machinery & motor vehicles	85.8	93.1	101.4	102.0	100.8	96.9	87.6	80.3	73.9	74.7	74 to 78
Crops stored 2/	29.2	33.0	29.1	27.7	23.9	29.7	23.6	19.1	20.9	26.2	18 to 22
Financial assets	25.3	26.5	28.0	29.5	31.3	32.8	33.0	35.2	35.2	35.9	35 to 37
Total farm assets	907.7	995.6	996.7	961.0	944.3	846.7	746.4	689.5	706.3	748.5	780 to 790
Liabilities											
Real estate debt 3/	79.7	89.6	98.7	102.5	104.8	103.6	97.6	88.6	81.1	76.7	75 to 79
Non-real estate debt 4/	71.8	77.1	83.6	87.0	87.9	87.1	77.5	66.6	62.0	61.7	60 to 64
Total farm debt	151.6	166.8	182.3	189.5	192.7	190.7	175.1	155.1	143.1	138.4	134 to 142
Total farm equity	756.1	828.9	814.4	771.5	751.6	656.0	571.3	534.4	563.3	610.0	643 to 653
	Percent										
Selected ratios											
Debt-to-assets	16.7	16.8	18.3	19.7	20.4	22.5	23.5	22.5	20.3	18.5	17 to 18
Debt-to-equity	20.1	20.1	22.4	24.6	25.6	29.1	30.6	29.0	25.4	22.7	21 to 22
Debt-to-net cash income	454	488	556	497	523	493	375	299	248	231	243 to 253

1/ As of Dec. 31. 2/ Non-CCC crops held on farms plus value above loan rates for crops held under CCC. 3/ Excludes debt on operator dwellings, but includes CCC storage and drying facilities loans. 4/ Excludes debt for nonfarm purposes. F = forecast.

Information contacts: Ken Erickson or Jim Ryan (202) 786-1798.

Table 34.—Cash Receipts from Farm Marketings, by State

Region & State	Livestock & products				Crops 1/				Total 1/			
	1987	1988	May 1989	June 1989	1987	1988	May 1989	June 1989	1987	1988	May 1989	June 1989
	\$ million 2/											
North Atlantic												
Maine	228	216	19	18	184	188	24	10	412	404	43	28
New Hampshire	67	60	5	5	72	77	5	3	139	137	10	8
Vermont	377	352	31	28	45	53	3	2	422	405	34	30
Massachusetts	121	105	9	9	259	297	16	15	379	402	26	24
Rhode Island	13	13	1	1	64	65	4	2	77	78	6	4
Connecticut	191	180	14	15	194	202	16	11	385	382	30	25
New York	1,809	1,781	158	143	800	824	40	45	2,610	2,605	198	188
New Jersey	195	192	17	16	438	450	35	43	633	642	52	59
Pennsylvania	2,310	2,348	204	188	904	935	68	61	3,213	3,284	272	249
North Central												
Ohio	1,616	1,604	151	138	1,862	2,025	103	121	3,478	3,629	254	259
Indiana	1,874	1,749	150	164	1,832	2,367	103	154	3,706	4,117	252	318
Illinois	2,249	2,243	180	180	3,850	4,218	248	345	6,099	6,461	428	525
Michigan	1,282	1,206	105	108	1,311	1,464	76	88	2,594	2,670	181	196
Wisconsin	4,216	4,281	372	365	799	767	42	46	5,015	5,048	414	411
Minnesota	3,561	3,364	297	307	2,270	2,743	176	228	5,831	6,107	473	535
Iowa	5,202	5,045	449	400	3,563	4,029	214	256	8,765	9,074	663	656
Missouri	2,102	2,011	160	170	1,586	1,814	58	205	3,687	3,826	218	375
North Dakota	762	849	48	48	1,601	1,574	88	95	2,363	2,423	136	143
South Dakota	1,907	1,965	117	111	820	945	44	49	2,726	2,911	162	160
Nebraska	4,857	5,336	455	409	1,967	2,643	197	232	6,824	7,979	652	641
Kansas	3,919	4,265	428	349	1,963	2,329	117	200	5,882	6,594	545	549
Southern												
Delaware	370	444	9	8	116	149	7	11	487	592	16	19
Maryland	734	768	37	34	405	459	29	30	1,140	1,226	66	64
Virginia	1,275	1,294	75	75	484	592	20	38	1,759	1,886	94	113
West Virginia	174	179	14	14	60	70	1	5	234	248	16	19
North Carolina	2,111	2,179	136	137	1,658	1,994	76	126	3,768	4,173	212	263
South Carolina	450	488	40	35	479	590	22	70	929	1,078	62	105
Georgia	1,825	2,011	88	93	1,299	1,553	57	113	3,124	3,544	145	206
Florida	1,086	1,114	92	91	4,368	4,697	796	282	5,454	5,811	888	373
Kentucky	1,507	1,538	77	95	940	992	25	49	2,448	2,530	102	144
Tennessee	1,110	1,080	81	102	874	965	33	66	1,984	2,046	114	168
Alabama	1,521	1,695	75	68	633	706	33	48	2,154	2,400	108	116
Mississippi	1,042	1,176	56	62	945	1,164	16	60	1,987	2,341	72	121
Arkansas	2,083	2,278	103	116	1,112	1,696	33	155	3,195	3,974	137	271
Louisiana	511	587	46	57	965	1,299	31	34	1,476	1,885	77	91
Oklahoma	2,066	2,284	185	173	811	1,127	65	197	2,877	3,410	250	370
Texas	6,092	6,498	553	534	2,907	3,783	198	293	8,998	10,281	751	827
Western												
Montana	747	816	47	32	608	570	30	28	1,355	1,386	77	60
Idaho	924	1,033	88	74	1,164	1,258	85	74	2,089	2,291	172	148
Wyoming	528	575	42	21	127	156	8	3	655	730	50	24
Colorado	2,323	2,655	221	190	885	1,037	80	88	3,207	3,692	301	278
New Mexico	817	910	53	56	351	362	23	37	1,168	1,272	75	93
Arizona	773	793	61	62	987	1,167	100	53	1,760	1,959	162	116
Utah	466	537	44	41	134	150	6	9	600	687	50	51
Nevada	164	150	14	12	69	79	3	3	232	229	17	15
Washington	981	1,141	94	93	1,880	2,146	125	174	2,862	3,287	219	268
Oregon	655	669	43	48	1,236	1,427	66	83	1,890	2,096	109	131
California	4,426	4,704	455	377	11,382	11,894	1,023	771	15,808	16,598	1,478	1,148
Alaska	11	10	1	1	19	20	1	1	30	30	2	2
Hawaii	88	89	8	8	473	479	40	39	560	568	48	47
United States	75,717	78,862	6,209	5,880	63,751	72,569	4,707	5,153	139,468	151,431	10,916	11,034

1/ Sales of farm products include receipts from commodities placed under CCC loans minus value of redemptions during the period. 2/ Estimates as of end of current month. Totals may not add because of rounding.

Information contact: Roger Strickland (202) 786-1804.

Table 35.—Cash Receipts from Farming

	Annual						1988	1989				
	1983	1984	1985	1986	1987	1988	June	Feb	Mar	Apr	May	June
	\$ million											
Farm marketings & CCC loans*	136,567	142,439	144,135	135,539	139,468	151,431	12,110	11,015	10,779	10,698	10,916	11,034
Livestock & products	69,438	72,968	69,845	71,534	75,717	78,862	6,075	6,228	6,250	6,010	6,209	5,880
Meat animals	38,893	40,832	38,589	39,122	44,276	45,975	3,401	4,133	3,872	3,713	3,806	3,548
Dairy products	18,765	17,944	18,063	17,753	17,710	17,668	1,416	1,435	1,568	1,559	1,612	1,508
Poultry & eggs	9,981	12,223	11,211	12,661	11,480	12,864	1,080	521	651	580	630	655
Other	1,801	1,969	1,982	1,997	2,252	2,354	177	139	159	158	161	170
Crops	67,129	69,471	74,290	64,005	63,751	72,569	6,035	4,787	4,530	4,687	4,707	5,153
Food grains	9,713	9,740	8,993	5,638	5,581	7,700	1,380	345	292	312	430	1,402
Feed crops	15,535	15,668	22,520	17,161	13,102	15,291	1,509	1,262	1,104	964	949	1,315
Cotton (lint & seed)	3,705	3,674	3,687	3,605	4,087	4,668	110	530	60	123	91	51
Tobacco	2,752	2,813	2,722	1,918	1,827	2,039	0	17	0	21	0	0
Oil-bearing crops	13,546	13,641	12,474	10,571	11,159	13,699	803	714	731	515	546	488
Vegetables & melons	8,459	9,138	8,558	8,826	9,718	9,819	839	722	979	1,168	1,297	642
Fruits & tree nuts	6,056	6,733	6,957	7,246	8,257	8,822	816	533	454	442	527	677
Other	7,365	8,065	8,381	9,041	10,020	10,476	578	664	909	1,142	866	578
Government payments	9,295	8,430	7,704	11,813	16,747	14,480	1,548	2,208	1,103	902	820	237
Total	145,862	150,869	151,839	147,352	156,215	165,911	13,658	13,223	11,882	11,600	11,736	11,271

*Receipts from loans represent value of commodities placed under CCC loans minus value of redemptions during the month.

Information contact: Roger Strickland (202) 786-1804.

Table 36.—Farm Production Expenses

	Calendar year									
	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989 F
	\$ million									
Feed	20,971	20,855	18,592	21,725	19,852	18,015	16,179	16,898	20,962	20,000 to 24,000
Livestock	10,670	8,999	9,684	8,814	9,498	8,958	9,744	11,845	12,812	11,000 to 14,000
Seed	3,220	3,428	3,172	2,993	3,448	3,350	2,984	3,009	3,138	3,000 to 4,000
Farm-origin inputs	34,861	33,282	31,448	33,532	32,798	30,323	28,907	31,752	36,913	36,000 to 40,000
Fertilizer	9,491	9,409	8,018	7,067	7,429	7,258	5,787	5,610	6,400	6,000 to 8,000
Fuels & oils	7,879	8,570	7,888	7,503	7,143	6,584	4,790	4,442	4,544	4,000 to 6,000
Electricity	1,526	1,747	2,041	2,146	2,166	2,150	1,942	2,393	2,572	2,000 to 3,000
Pesticides	3,539	4,201	4,282	4,154	4,767	4,994	4,484	4,588	4,716	5,000 to 6,000
Manufactured inputs	22,435	23,927	22,229	20,870	21,505	20,986	17,003	17,033	18,233	18,000 to 22,000
Short-term interest	8,717	10,722	11,349	10,615	10,396	8,821	7,795	7,305	7,287	7,000 to 9,000
Real estate interest 1/	7,544	9,142	10,481	10,815	10,733	9,878	9,131	8,187	7,885	7,000 to 9,000
Total interest charges	16,261	19,864	21,830	21,430	21,129	18,699	16,926	15,492	15,172	15,000 to 17,000
Repair & maintenance 1/ 2/	7,075	7,021	6,428	6,529	6,416	6,370	6,426	6,546	6,858	7,000 to 8,000
Contract & hired labor	9,293	8,931	10,075	9,725	9,729	9,799	9,890	10,821	11,202	11,000 to 13,000
Machine hire & custom work	1,823	1,984	2,025	1,896	2,170	2,184	1,810	1,956	2,171	2,000 to 3,000
Marketing, storage, & transportation	3,070	3,523	4,301	3,904	4,012	4,127	3,652	3,823	3,279	4,000 to 5,000
Misc. operating expenses 1/	6,881	6,909	7,262	9,089	9,106	8,232	7,993	8,306	8,809	6,000 to 8,000
Other operating expenses	28,142	28,368	30,089	31,143	31,433	30,712	29,771	31,452	32,328	32,000 to 36,000
Capital consumption 1/	21,474	23,573	24,287	23,873	23,105	20,847	18,918	17,364	17,422	17,000 to 18,000
Taxes 1/	3,891	4,246	4,036	4,469	4,059	4,231	4,125	4,345	4,378	4,000 to 5,000
Net rent to nonoperator landlord	6,075	6,184	6,059	5,060	8,640	8,158	6,737	7,060	7,527	7,000 to 8,000
Other overhead expenses	31,440	34,003	34,381	33,402	35,804	33,236	29,780	28,769	29,326	28,000 to 31,000
Total production expenses	133,139	139,444	139,980	140,377	142,669	133,956	122,387	124,498	131,963	136,000 to 140,000

1/ Includes operator dwellings. 2/ Beginning in 1982, miscellaneous operating expenses include other livestock purchases & dairy assessments. Totals may not add because of rounding. F = forecast.

Information contacts: Chris McGath (202) 786-1804, Andy Bernat (202) 786-1808.

Table 37.—CCC Net Outlays by Commodity¹ & Function

	Fiscal year										
	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989 E	1990 E
	\$ million										
COMMODITY/PROGRAM											
Feed grains	1,286	-533	5,397	6,815	-758	5,211	12,211	13,967	9,053	4,169	7,067
Wheat	879	1,543	2,238	3,419	2,536	4,691	3,440	2,836	678	84	197
Rice	-76	24	164	664	333	990	947	906	128	692	561
Upland cotton	64	336	1,190	1,363	244	1,553	2,142	1,786	666	1,723	298
Tobacco	-88	-51	103	880	346	455	253	-346	-453	-481	-201
Dairy	1,011	1,894	2,182	2,528	1,502	2,085	2,337	1,166	1,295	658	686
Soybeans	116	87	169	288	-585	711	1,597	-476	-1,676	-19	168
Peanuts	28	28	12	-6	1	12	32	8	7	6	4
Sugar	-405	-121	-5	49	10	184	214	-65	-246	0	0
Honey	9	8	27	48	90	81	89	73	100	66	56
Wool	35	42	54	94	132	109	123	152	1/ 5	95	110
Operating expense 2/	157	159	294	328	362	346	457	535	614	623	635
Interest expenditure	518	220	-13	3,525	1,064	1,435	1,411	1,219	395	206	347
Export programs 3/	-669	-940	65	398	743	134	102	276	200	122	106
Other	-113	1,340	-225	-1,542	1,295	-314	486	371	1,695	5,540	1,314
Total	2,752	4,036	11,652	18,851	7,315	17,683	25,841	22,408	12,461	13,484	11,348
FUNCTION											
Price-support loans (net)	-66	174	7,015	8,438	-27	6,272	13,628	12,199	4,579	-138	1,500
Direct payments											
Deficiency	79	0	1,185	2,780	612	6,302	6,166	4,833	3,971	5,559	6,024
Diversion	56	0	0	705	1,504	1,525	64	382	8	-1	0
Dairy termination	0	0	0	0	0	0	489	587	260	110	211
Other	25	0	0	0	0	0	27	60	0	45	0
Disaster	258	1,030	306	115	1	0	0	0	6	0	0
Total direct payments	418	1,030	1,491	3,600	2,117	7,827	6,746	5,862	4,245	5,713	6,235
1988 crop disaster	0	0	0	0	0	0	0	0	0	3,750	0
Emergency livestock/forage assistance	23	329	16	0	0	0	0	0	31	608	201
Purchases (net)	1,681	1,602	2,031	2,540	1,470	1,331	1,670	-479	-1,131	390	60
Producer storage payments	254	32	679	964	268	329	485	832	658	343	141
Processing, storage, & transportation	259	323	355	665	639	657	1,013	1,659	1,113	602	780
Operating expense 2/	157	159	294	328	362	346	457	535	614	623	635
Interest expenditure	518	220	-13	3,525	1,064	1,435	1,411	1,219	395	206	347
Export programs 3/	-669	-940	65	398	743	134	102	276	200	122	106
Other	177	1,107	-281	-1,607	679	-648	329	305	1,757	1,265	1,343
Total	2,752	4,036	11,652	18,851	7,315	17,683	25,841	22,408	12,461	13,484	11,348

1/ Fiscal 1988 wool & mohair program outlays were \$130,635,000 but include a one-time advance appropriation of \$126,108,000, which was recorded as a wool program receipt by Treasury. 2/ Does not include CCC transfers to general sales manager. 3/ Includes export guarantee program, direct export credit program, and CCC transfers to the general sales manager. E = Estimated in the fiscal 1990 mid-session review. Fiscal 1990 estimated outlays do not incorporate the impact of the Drought Assistance Act of 1989. Minus (-) indicates a net receipt (excess of repayments or other receipts over gross outlays of funds).

Information contact: Richard Pazdalski (202) 467-5148.

Food Expenditures

Table 38.—Food Expenditure Estimates

	Annual			1989			1989 year-to-date		
	1986	1987	1988	May P	June P	July P	May	June	July P
\$ billion									
Sales 1/ Off-premise use 2/ Meals and snacks 3/	237.1 158.2	244.9 174.2	255.7 186.8	23.3 16.8	23.4 17.2	23.7 17.6	109.0 78.0	132.3 95.2	156.1 112.8
1988 \$ billion									
Sales 1/ Off-premise use 2/ Meals and snacks 3/	257.6 171.3	255.2 181.3	255.7 186.8	21.9 16.1	21.9 16.5	22.2 16.8	103.5 75.5	125.4 92.0	147.5 108.8
Percent change from year earlier (\$ bil.)									
Sales 1/ Off-premise use 2/ Meals and snacks 3/	3.3 6.7	3.3 10.1	4.4 7.2	9.3 6.4	8.7 6.7	6.1 5.0	7.1 6.7	7.4 6.7	7.2 6.4
Percent change from year earlier (1988 \$ bil.)									
Sales 1/ Off-premise use 2/ Meals and snacks 3/	.3 2.7	-.8 5.8	.2 3.0	1.2 1.4	1.2 2.0	-.3 .3	-.5 2.0	-.2 2.0	-.2 1.7

1/ Food only (excludes alcoholic beverages). Not seasonally adjusted. 2/ Excludes donations and home production. 3/ Excludes donations, child nutrition subsidies, and meals furnished to employees, patients, and inmates. P = preliminary.

NOTE: This table differs from Personal Consumption Expenditures (PCE), table 2, for several reasons: (1) this series includes only food, not alcoholic beverages and pet food, which are included in PCE; (2) this series is not seasonally adjusted, whereas PCE is seasonally adjusted at annual rates; (3) this series reports sales only, but PCE includes food produced and consumed on farms and food furnished to employees; (4) this series includes all sales of meals and snacks. PCE includes only purchases using personal funds, excluding business travel and entertainment. For a more complete discussion of the differences, see "Developing an Integrated Information System for the Food Sector," Agr.-Econ. Rpt. No. 575, Aug. 1987.

Information contact: Alden Manchester (202) 786-1880.

Transportation

Table 39.—Rail Rates; Grain & Fruit/Vegetable Shipments

	Annual			1989						
	1986	1987	1988	July	Feb	Mar	Apr	May	June	July
Rail freight rate index 1/ (Dec. 1984=100)										
All products	100.7	100.1	104.8	105.2	105.9	105.9	106.1 P	106.1 P	106.4 P	106.6 P
Farm products	99.6	99.3	105.6	106.2	108.9	108.6	109.0 P	108.6 P	107.7 P	108.3 P
Grain	98.9	98.7	105.4	106.4	109.2	109.8	109.2 P	108.8 P	107.8 P	108.5 P
Food products	99.9	98.6	103.2	103.7	103.1	103.7	103.1 P	103.3 P	103.8 P	104.0 P
Grain shipments										
Rail carloadings (1,000 cars) 2/	24.4	29.0	30.7	29.7	29.8 P	31.8 P	30.1 P	25.9 P	27.3 P	25.0 P
Fresh fruit & vegetable shipments										
Piggy back (1,000 cwt) 3/ 4/	629	588	532	662	419	455	502	763	709	603
Rail (1,000 cwt) 3/ 4/	563	630	608	488	583	686	571	683	900	521
Truck (1,000 cwt) 3/ 4/	9,031	9,137	9,602	9,609	8,650	9,391	10,293	11,301	12,277	9,762
Cost of operating trucks hauling produce 5/										
Owner operator (cts./mile)	113.1	116.3	118.7	118.2	122.1	122.9	124.1	123.5	123.4	123.4
Fleet operation (cts./mile)	113.6	116.5	118.4	118.2	121.4	121.9	123.1	122.6	122.7	122.9

1/ Department of Labor, Bureau of Labor Statistics. 2/ Weekly average; from Association of American Railroads. 3/ Weekly average; from Agricultural Marketing Service, USDA. 4/ Preliminary data for 1988 & 1989. 5/ Office of Transportation, USDA. P = preliminary.

Information contact: T.Q. Hutchinson (202) 786-1840.

Indicators of Farm Productivity

Table 40.—Indexes of Farm Production Input Use & Productivity¹

	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988 2/
1977=100										
Farm output	111	104	118	116	96	112	118	111	110	99
All livestock products 3/	104	108	109	107	109	107	110	110	113	116
Meat animals	103	107	106	101	104	101	102	100	102	105
Dairy products	101	105	108	110	114	110	117	116	116	118
Poultry & eggs	114	115	119	119	120	123	128	133	144	149
All crops 4/	113	101	117	117	88	111	118	109	106	92
Feed grains	116	97	121	122	67	116	134	123	105	73
Hay & forage	108	98	106	109	100	107	106	106	103	90
Food grains	108	121	144	138	117	129	121	106	106	98
Sugar crops	94	97	107	96	93	95	97	106	112	107
Cotton	102	79	109	85	55	91	94	69	104	108
Tobacco	80	93	108	104	75	90	81	63	64	71
Oil crops	129	99	114	121	91	106	117	110	106	88
Cropland used for crops	100	101	102	101	88	99	98	94	88	87
Crop production per acre	113	100	115	116	100	112	120	116	122	106
Farm input 5/	105	103	102	99	97	95	92	87	86	--
Farm real estate	103	103	104	102	101	97	95	93	92	--
Mechanical power & machinery	104	101	98	92	88	84	80	75	72	--
Agricultural chemicals	123	123	129	118	105	121	123	110	111	--
Feed, seed, & livestock purchases	115	114	108	108	110	106	106	103	108	--
Farm output per unit of input	105	101	116	117	99	119	128	127	127	--
Output per hour of labor										
Farm 6/	113	109	123	125	99	121	139	139	142	--
Nonfarm 7/	99	99	100	99	102	105	106	108	109	--

1/ For historical data & indexes, see Economic Indicators of the Farm Sector: Production & Efficiency Statistics, 1986, ECIFS 5-6. 2/ Preliminary indexes for 1988 based on Crop Production: 1988 Summary, released in January 1989, & unpublished data from the Agricultural Statistics Board, NASS. 3/ Gross livestock production includes minor livestock products not included in the separate groups shown. It cannot be added to gross crop production to compute farm output. 4/ Gross crop production includes some miscellaneous crops not in the separate groups shown. It cannot be added to gross livestock production to compute farm output. 5/ Includes other items not included in the separate groups shown. 6/ Economic Research Service. 7/ Bureau of Labor Statistics. -- = not available.

Information contact: Jim Hauver (202) 786-1459.

Food Supply and Use

Table 41.—Per Capita Consumption of Major Food Commodities
(See the March 1989 issue.)

Information contact: Judy Putnam (202) 786-1870.

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